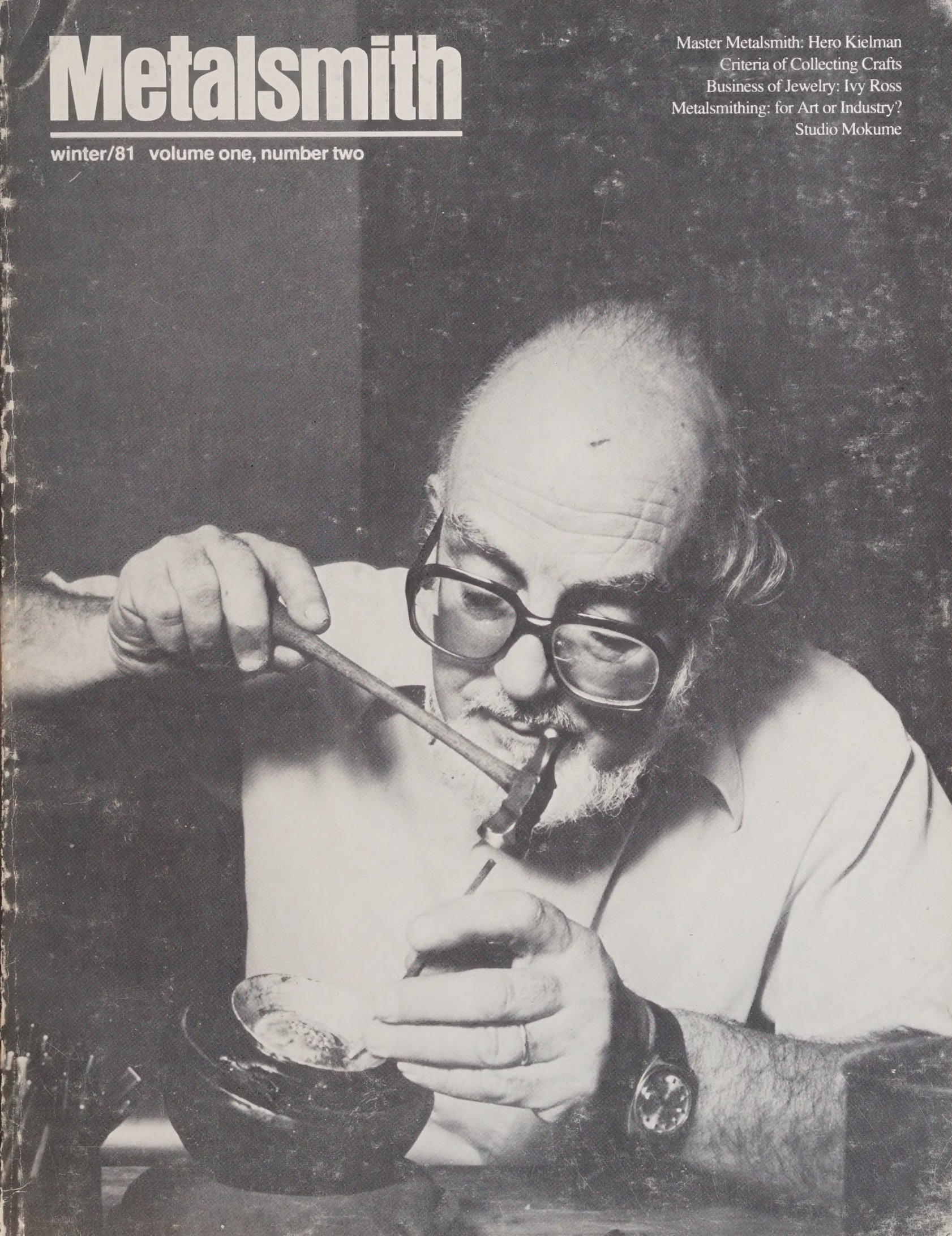
Metalsmith

winter/81 volume one, number two

Master Metalsmith: Hero Kielman
Criteria of Collecting Crafts
Business of Jewelry: Ivy Ross
Metalsmithing: for Art or Industry?
Studio Mokume



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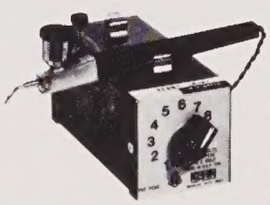

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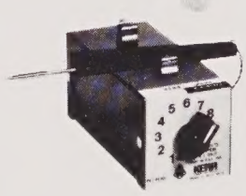

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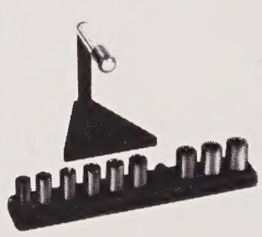

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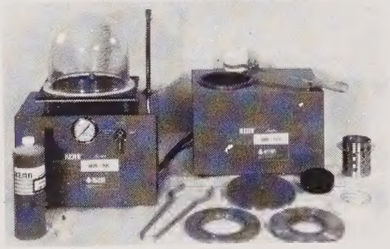

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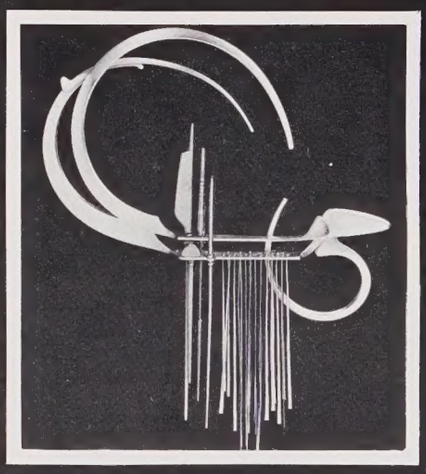

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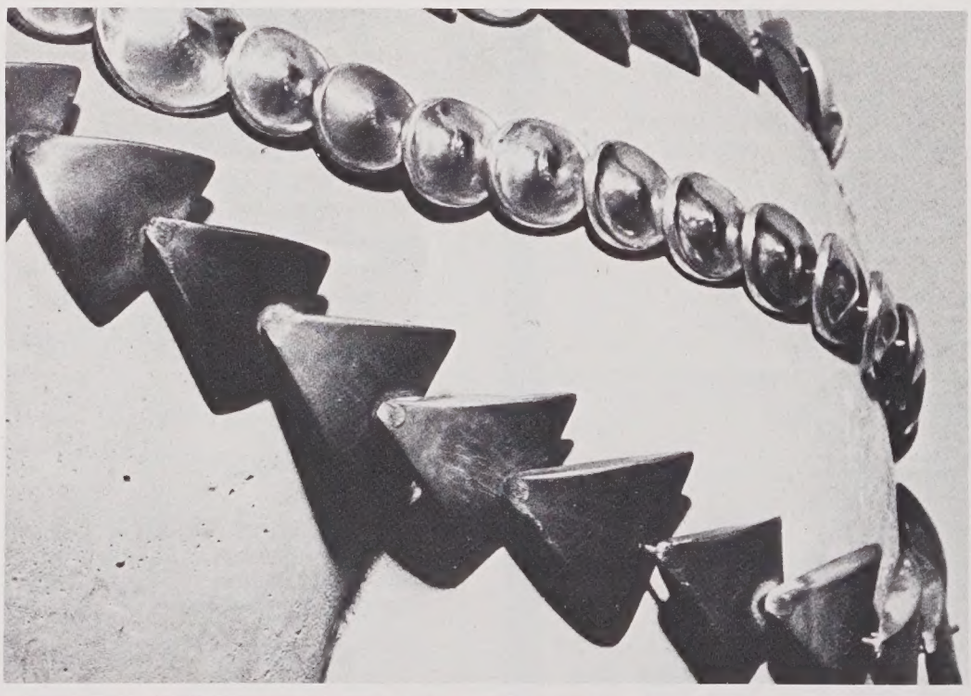

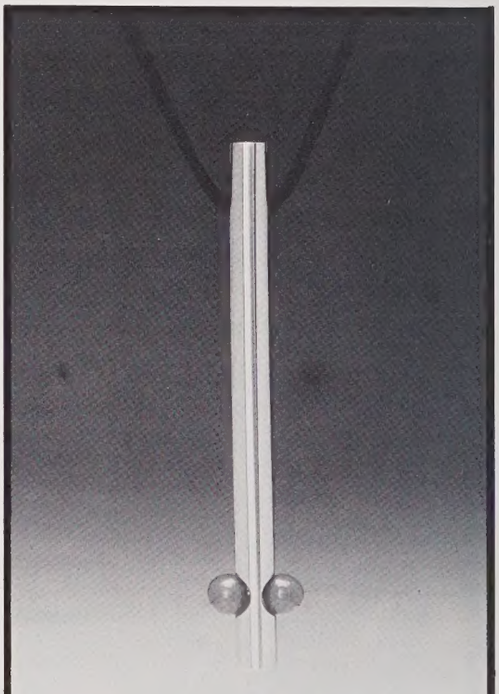

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Back cover: Richard Helzer, *C8002P* neckpiece with wallmount, from the exhibition *Metal/NonMetal* at Synopsis Gallery, Winetka, Illinois

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Editorial

Second Class, Again

While attending the *Silver in American Life* exhibition at the Virginia Museum recently, I was disappointed to see only seven contemporary pieces represented. While these seven were excellent, provoking examples of contemporary metalsmithing, I was longing for more. The Yale collection presented an impressive (if rather boring) concentration of 17th- and 18th-century works, but the 20th century, with all its innovations, was lacking. As one previewer was overheard to comment, "These are nice pieces, but they look like silver my grandmother had." By contrast, the seven contemporary pieces elicited the most reaction. Is it not time to change the craftsman's image?

Considering the variety of the craft revolution in this country, and the ever-growing interest on the part of the buying public, the few exhibited contemporary pieces seemed but a token representation of the current metals movement. No wish to single out Yale—it has a least made a very distinguished beginning, which it is hoped, will continue, but the attitude of the museum, collector and critic across the country disturbs me. How often have you seen the work of a contemporary metalsmith or jeweler reviewed in the "Art" section of *Time* magazine? Ah, but you have seen paintings and sculpture. Not to berate them, but aren't we equally important? I am amazed when I hear of the absurd (compared to what you can buy in the metals field) prices being paid for some contemporary paintings and sculpture. In many cases, the price does not seem to equal the quality or artistic merit of the design. What has happened?

Obviously, other significant factors are at work: Well-planned publicity hype? Agents? Strong self-promotion? Perhaps we are incompetent public relationists. Possibly, we don't appreciate its value. Maybe, we just don't give a damn. But if we don't, how can we expect museums and other serious collections to acknowledge our importance. It's time to quit hammering our silver and start flashing it a little.

An interesting footnote: There are several practicing metalsmiths who realize and appreciate the significance of what we (collectively) are producing—they're investing in the works of others. The Metropolitan Museum of Art has also begun to add several contemporary metal pieces to its collection. It is hoped that other museums will follow suit, since the Met's collection now "legitimizes" our existence. After all, who can complain about bargain-basement prices. Now is the time to buy. If $1 million can be spent for a painting, surely a mere $3,000 is cheap for an outstanding piece of metalwork. I am truly amazed others are not taking advantage of the present situation. After all, once we get our New York agents, our prices will double (triple? quadruple?).

—MB

Master Metalsmith: Hero Kielman

by Anne Barros

The Dutch Governmental School for Arts and Crafts is located at Schoonhoven, the Netherlands. It was 1936, and Schoonhoven was a beautiful medieval town steeped in goldsmithing tradition. For five years Hero Kielman went daily by train and bicycle from his home city, The Hague, to Schoonhoven to study a traditional European curriculum devoted to jewelry. Since holloware was strictly separated as another discipline, he also went to night school to master silversmithing and chasing techniques. With two first prizes for excellence in design and craftsmanship, he received his certificate as a goldsmith and went on to study at the Amsterdam School of Arts and Crafts.

Underground Jeweler

The war years in occupied Holland were not the best of times for an aspiring jeweler to launch a career. However, they often demanded those qualities of resourcefulness and perseverence that make a fine jeweler. What does a goldsmith do when all precious metals and coins are being shipped out of the country to pay Nazi war debts? Kielman reminisces fondly of defying Nazi orders by collecting milk buckets of silver coins, which at night he melted down into bars. The silver bars were then used to help fund the resistance movement that he had joined in 1940. The resistance also appreciated his skills as an engraver and many nights he worked making the rubber stamps needed to falsify documents for members of the underground.

Because money was worthless during the war, there was a tremendous demand for jewelry. Bartering was rife. A gold ring might command a kilo of sugar, but working on jewelry presented problems, since there was no gas and no oxygen. Only bakers were supplied with gas and that between the hours of 2AM and 7AM. Learning this, the resourceful Kielman connected a vacuum cleaner to his gas line and managed to suck gas from the baker across the street. Then, using a blow pipe, he soldered away, until one unfortunate night the motor sparked and caused an explosion that ended the device.

Hero Kielman in 1936

The Hague Jeweler

In 1945, with the war over, Kielman married and started his own jewelry business in The Hague, with his encouraging wife, Wynanda, busy at the polishing motor. By 1947 his store was located on a street near the Royal Palace with many other jewelers and fine shops. Imagine his pleasure at seeing Queen Juliana's face peering through his store's display windows? There his fine drawings and preliminary wax settings, done in great detail, vied for the attention of the affluent businessmen, who returned each year to The Hague from far-flung posts in the Dutch East Indies.

One of Kielman's most important commissions at this time was a theater ring for the city of Rotterdam. The ring, designed with the symbols of the theater and the city, weighed 25 grams. To cast such a large amount of gold in the days before modern casting machines meant swinging at arm's length, windmill fashion, a centrifugal casting set and praying not to have to pick flecks of gold off the ceiling.

Au Canada

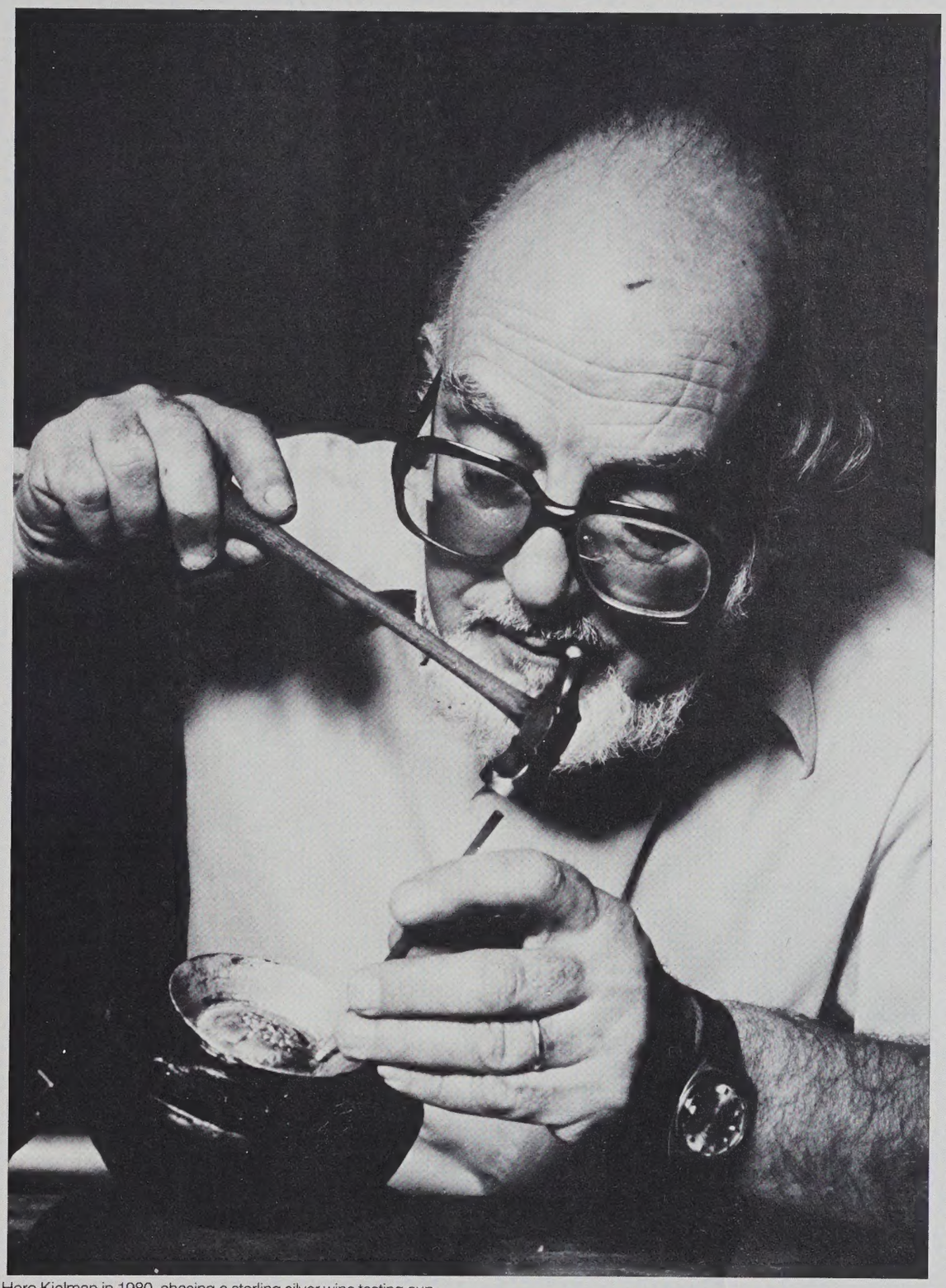
When the Dutch East Indies were lost as colonies in 1949, the resultant economic disaster was keenly felt by the cosmopolitan clientele of The Hague. In turn, its jewelers went through a difficult recession period. As chance would have it, the Canadian Embassy was located near the Kielman business, and Ambassador and Mrs. Dupuy suggested that Kielman with his jewelry skills would easily find a successful future in Canada. In 1953, after much encouragement, Kielman took the plunge and accepted an offer from a Toronto jewelry firm.

To this day the Kielmans are an adventuresome couple, but even they look back in amazement at the wrenching experience they underwent to settle in North America. First, there were the monetary restrictions—they could take only $1,000 out of Holland. Then there were all of Kielman's dearly made and needed tools. They could come later, but it was *verboten* for the gems and precious metals to go. Fortunately, his pitch bowl was large and stored a lot.

In their northern European woolens, and with two young children in tow, the Kielmans landed in New York City one hot July day and made their way to Canada. Toronto in the early fifties was still called "Toronto the Good," and on Sundays the curtains were drawn on the windows of the better department stores so that the Sabbath not be violated by covetous consumers. Perhaps it was best that the curtains were drawn over the rhinestone jewelry and porcelain figurines so that the Kielmans' culture shock was eased.

Soon after settling, Kielman contacted the fledgling Canadian Jewellers' Institute to assure his accreditation. Having established that in record time, the Institute asked Kielman if he would like to teach for the Ontario Department of Education. He has been teaching ever since. Although he had intended to establish a retail business in Toronto, it was decided that there probably was no significant market in the early fifties for the more contemporary jewelry he wanted to make. There certainly was little appreciation of modern design. Thus his work has mainly been sold on commission from his home studio.

When Canadian education authorities refused to recognize his Dutch master jeweler's certificate as equivalent to a North American master's degree, Kielman obtained his M.F.A. from the Rochester Institute of Technology's School for American Craftsmen in 1966. Pre-



Hero Kielman in 1980, chasing a sterling silver wine tasting cup

vious to this, Kielman's association with other North American metalworkers had been limited to workshops in the late 1950s sponsored by Handy and Harmon, at places like the University of Indiana, where Alma Eikerman was teaching. Since he felt the need to meet and exchange ideas with other professional metalsmiths, he readily concurred when in Toronto in the late sixties Phil Morton suggested that there should be an organization for people particularly interested in metal. Thus the seeds of the Society of North American Goldsmiths were planted. The first meeting of the Society was held in Chicago in 1969 and there Morton was elected President and Kielman, because he brought along a tape recorder, was given the job of Secretary-Treasurer.

In 25 years of teaching jewelry arts and related subjects, Kielman has set up two metal departments, juried innumerable shows, sat on many craft council boards and assumed administrative jobs, like Director of the Special Crafts Department and Vice-Principal of what is presently George Brown College in Toronto. Kielman agrees that he probably would be richer now if he had started his own business with a proper shopfront rather than teaching and doing commission work. His wife, who has often had the earrings sold right off her ears, attests to his abilities as a salesman.

Carmelitan Monstrance, sterling silver and partly gold-plated, raised and fabricated, 12"h.

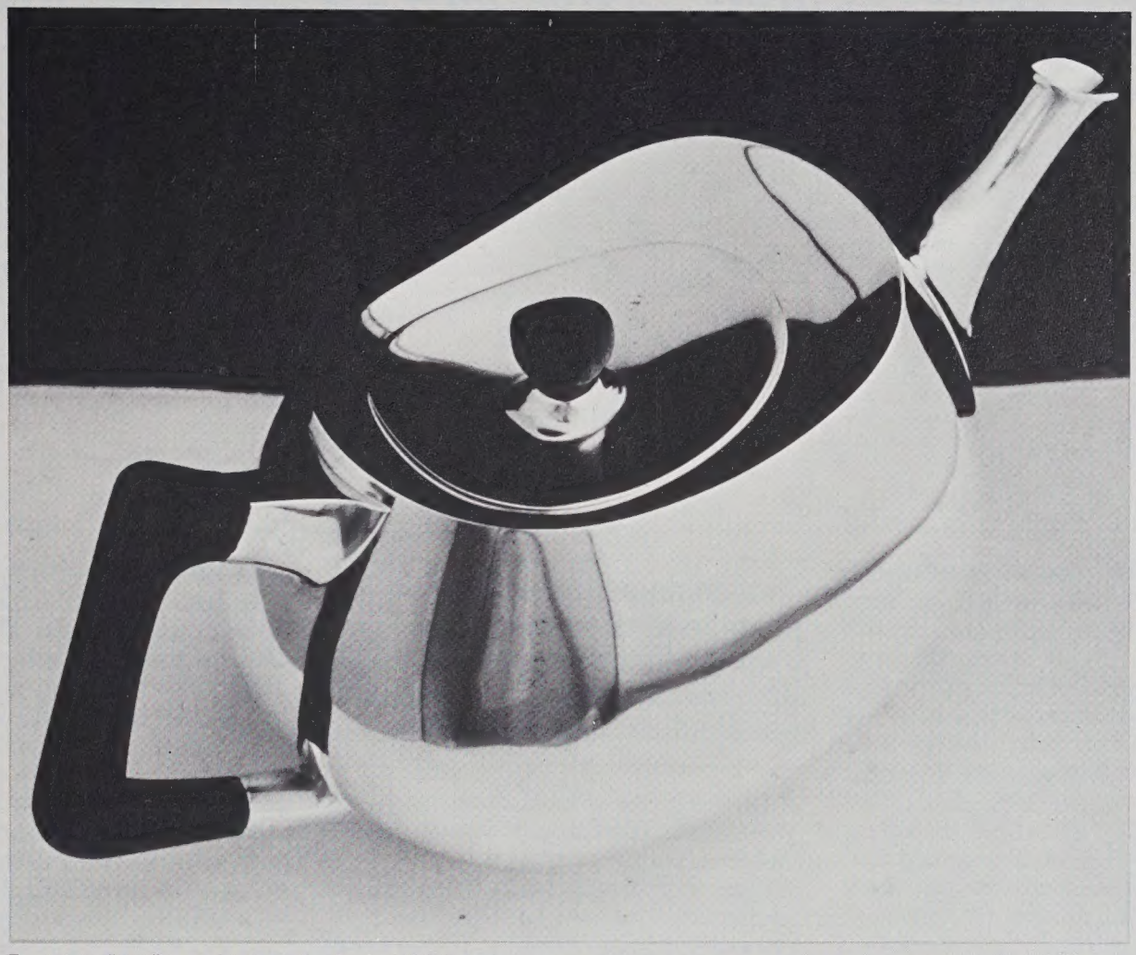
However, there are no regrets. "People who wanted something different" found their way to him and he took pleasure in designing and executing jewelry and holloware for them.

Of course, in the beginning, Kielman admits to running roughshod over the very conservative taste of Torontonians. His renderings changed from the precise European style to a deliberately vague one that allowed him to introduce difficult contemporary concepts until consent for producing the piece had been received. The result was often somewhat different from what the client had expected, but it went with a guarantee that the customer should wear or use the piece for a month and if, at the end of that time, he or she was not happy with the piece, it could be returned for another or for a refund. No one ever returned a piece.

In a long list of awards, one-man shows and international exhibitions, including *Expo '67*, Kielman recalls that one of his favorite pieces to make was a tiara that was worn as a bridal crown. It was not only the design and materials (diamonds, emeralds and platinum) that pleased him, but also the fact that execution of the piece demanded all of his skills as a jeweler.

Students of Perfectionism

To be a student of Hero Kielman, it helps if you are dedicated, an early riser and tolerant of perfectionism. Kielman is definitely looked upon as the "master." In a North American school, Kielman's European training is frankly appreciated. When he brings out his Brussel's earth (literally fine clay from Brussels) to hold together a delicate soldering job, demonstrates minute piercing around a claw setting or delights the class with an example of how to fill out information on a jeweler's order form ("18k yellow gold ring with green stone—customer claims it's an emerald"), he is very much handing on the tradition of western European jewelry. The fact that his speech occasionally betrays his origins, with an "idée" for "idea" or the old-fashioned "gent's rings," it still is received with amused understanding by his classes at Humber College, where he set up a metal arts program in 1975. Students are less amused when his standards demand working or reworking a piece until it is like the drawing says it should be but appreciate that this discipline will prepare them for working in a commercial environment. It is an accepted axiom that the Kielman way of making a piece will always be more difficult but give you a "more perfect" result. His wife corroborates that he brings his training as a jeweler to even the most rudimentary carpentry tasks. His design methodology successfully involves



Teapot, sterling silver and rosewood, raised and fabricated

a lot of visual problem solving to develop confidence in the many students who enter the metals field without an arts background.

What often impresses people when first meeting Kielman is the fact that he looks like a jeweler. His neatly clipped beard and personable manner easily charm. Even when put on the spot, his sense of humor enables him to maintain a certain "grace under pressure." This is not to say that he cannot be most frightening to a student who has just put a piece of stainless steel through the rolling mill!

He puts much store on the equipment and condition of both his own personal studio and those at Humber College. Enormous energy is spent so that work can be accomplished with facility. There are no radios blaring or coffee cups on the edges of benches. Concern for health, safety and having the right tool in the right place pervade. This is not to say that the more "arty" side of metal arts is neglected. His students have done well in design competitions, especially the DeBeers. Although a detached retina has necessitated the roguish patch over his right eye, students all agree that in general he sees better than they do, especially when it comes to scrutinizing solder joints.

A Functionalist Philosophy

In Kielman's philosophy of metal today, casting comes out on the lowest rung. Although his studio contains a first-rate casting lab, he stresses the fabrication and forging of metal. "What comes out of your metal between the anvil and the hammer is what I like to do." The feel of a fabricated ring, as opposed to a cast one, immediately pleases him. Although he stresses that students need to be exposed to all techniques of working metal, he scoffs at North American metalsmiths who try to master every possible technique in the shortest possible time. The metalsmith who is successful usually has pursued one technique creatively and is known for his specialization.

In his own work, he acknowledges the influence of contemporary silversmithing in the Netherlands, with its clean fluid lines and a design inspiration mostly drawn from natural forms. For many of these pieces inspired by nature, Kielman likes to alloy his own golds to achieve the right mixture of colors. He prefers highly refined finishes and, in holloware, finds the sinking technique especially satisfying. Perhaps most important of all in the Kielman creed is the need for his work to be functional. "I've never made a piece you could not use." Working for years on exhibition pieces that are only appreciated for a few weeks in a showcase he finds too much art for art's sake and not in the tradition of functionalism of the gold and silversmith.

So, at 8:10AM, with the wind off Lake Ontario needling the studio windows, the metal arts students at Humber College are crouched over their practice plates. Kielman is there demonstrating, encouraging and happily continuing in Canada the tradition of his Dutch forebears who taught Rembrandt to sharpen gravers and cut.

Anne Barros *is a Toronto silversmith and part-time teacher at Humber College.*

Metalsmithing: For Art or Industry?

by Peter Gainsbury

The following is the text of a lecture given at Rhode Island School of Design/Brown University in February 1980.

I think that I must start by trying to establish my credentials for having the nerve to come here, as a complete outsider, to inflict on you my views on the relationship between the American jewellery industry and design education system, or should I say the lack of relationship.

Firstly, I can claim some qualification from the fact that I am an officer of the Worshipful Company of Goldsmiths, an organisation which has been continuously involved in the training and education of goldsmiths and silversmiths for around 800 years. Anyone who has visited Goldsmiths' Hall in the City of London will understand how some of that tradition rubs off on those who are fortunate enough to be concerned in the day-to-day operations of the Company.

Though, like the man discharged from the psychiatric hospital with a piece of paper proving he is sane, I have a certificate proving I am a Goldsmith, I must confess I have never formally practised or studied the craft, or for that matter design in any form, and, further, my teaching experience is minimal. I am by profession a metallurgist, have been involved in one way or another with precious metals for over 30 years and currently manage the Technical Department of the Goldsmiths' Company, which provides technical advisory and research services to the jewellery and silverware industry. My one positive personal qualification is that I had the good sense to marry a jewellery artist/craftsman who is also an experienced art teacher.

My official concern in the Company is with the technical efficiency of the industry. In the course of this work I have travelled extensively and visited jewellery factories, craftsmen and art schools throughout the Western world. I have come to realise that technical efficiency alone is not enough to maintain a prosperous industry. For complete success, a balanced blend of technology, management, craftsmanship and design are needed.

American-made commercial jewellery is generally beautifully made, impeccably finished and all too frequently deadly dull in design.

Over the past 10 years I have been privileged to make many visits to the United States and have been able to observe both your jewellery manufacturing industry and your design education system at first hand and to compare them with the British and European equivalents.

The American-made commercial jewellery is generally beautifully made, impeccably finished and all to frequently deadly dull in design. Few members of the Society of North American Goldsmiths would be proud to put their name to these designs. Now, in any issue of *Goldsmiths Journal* one can see illustrated contemporary American craft jewellery. This is often ingenious, witty perhaps, certainly individual, but in many cases almost equally certainly unsalable to the average consumer who makes the bulk of jewellery purchases in the United States.

I am well aware that some members of the U.S. jewellery manufacturing industry make well-designed jewellery by any international standard and that some craft jewellers produce eminently salable goods. The point I am making, however, is that the image the two sides, that is, the industry and those coming from the art education system, present to each other is summarised by these examples.

Now, if one looks at Italian and German commercial jewellery, as illustrated in their trade journals, one immediately sees exciting designs well executed, with which any designer should be proud to be identified, and which retailers would be glad to display in their stores. I suggest that the lack of availability of domestic-made jewellery of this type is one of the reasons why the United States during 1979 imported $400,000,000 worth of jewellery, a great deal from Italy.

Why has this situation arisen: favourable tariffs for developing countries? illegal gold dealing in certain European countries? high tariffs and nontariff barriers inhibiting exports? These factors must account for part of the trend, but these facts would ring truer if your industry was not so technically efficient. In my view, the American jewellery manufacturing industry is arguably the most efficient in the world, and I would also say is the most innovative, if it were not largely dependent on overseas manufacturers for much of its modern equipment. The organisation of all parts of the manufacturing process is generally first class; modern techniques are used to their best advantage and finish and presentation are second to none.

Unfortunately, when it comes to design, as a whole the standard is probably the lowest of that of all the major jewellery manufacturing industries. Reasons for this, I believe, are the very efficiency of the industry which leads it to subordinate design to ease of production, particularly finishing, and lack of trained designers who could ensure that aesthetic standards are not compromised.

In all my visits to the American jewellery industry, I cannot recollect ever meeting an American college-trained jewellery designer working full time in a jewellery factory. I have met many people who are employed as designers; some have been European trained, but most appear to be upgraded modelmakers whose particular skills are in converting to three dimensions the sketches of the boss, or his wife, in remodeling the old line for the new season, or regrettably practising the fine old art of knocking-off.

Other manufacturers purchase designs from Europe and in some odd cases actually manufacture and promote named synthetic designers whose fame depends upon charisma, looking the part and the

skills of Madison Avenue, genuine design talent not required.

Now, is this not strange? The U.S. has more and more colleges offering full-time degree courses in jewellery and silver design, which produce more and more graduates per annum. What riches should be available to the U.S. industry. Ask a jewellery manufacturer, however, why he does not employ graduate designers and almost invariably the answer is "we have tried but find they are completely impractical, unable to design and we just cannot spare the time to re-educate them to an understanding of the requirements of the industry."

Let us look at the other side now and try and see why this situation exists. After wide experience in European schools, the first extraordinary thing I noted in American schools was that departments of jewellery and silversmithing, or metalsmithing in your terminology, are almost always part of facilities of fine art, and the objective is to produce artists in metal and not goldsmiths or silversmiths at all. The degrees awarded are Bachelor of Fine Art or Master of Fine Art. These very titles alone are enough to put off a hard-headed manufacturer. He knows he is not manufacturing fine art and that fine art only makes money for the few who can hoodwink the public. He wants to sell in quantity and for that he needs good, practical design which is applied art.

To a European the American set-up is decidedly odd, as in most schools in Europe, and certainly in all the internationally famous ones, metalsmithing is considered an applied art and is taught in faculties of three-dimensional design, if not existing as a faculty in its own right. In fact, in Italy and France, where jewellery design of sorts is taught in Academies of Fine Art, there are no internationally renowned schools comparable with the German Fachhochschulen of Pforzheim and Schwäbisch Gmünd, the Goldsmiths High School of Copenhagen, the Vakschool at Schoonhoven in Holland and, may I say, the Central School of Art or the Sir John Cass School of Art in London or the Glasgow School of Art in Scotland.

. . . I cannot recollect ever meeting an American college-trained jewellery designer working full time in a jewellery factory.

I shall make an aside here to deal with the apparent inconsistency in my arguments arising from my comments on Italian and French design training. In Italy, craft schools do give some classicl art and design training, but do not pretend to produce designers. I believe that the average Italian inherits an awareness of art and design, which we less fortunately art-endowed nations just do not have. Good taste is instinctive to Italians and, given good craft training, good design follows naturally. Most Italian gem-set jewellery is produced in small family firms where the various jobs in the workshops are rotated round the staff. These small companies do not employ designers, but experienced craftsmen can produce designs following the current trends as a matter of routine.

The large companies which produce chain and all metal jewellery do, of course, employ strong design teams, recruiting designers from wherever they may be found, giving them first class working conditions and ensuring that they are able to travel to keep themselves up-to-date with world trends. It will be noted, however, that in these plants mechanical ingenuity in machine production methods forms the basis of the product line rather than pure design.

In France the picture is different. I do not subscribe to the view expressed by many British and American manufacturers that France is the source of the best commercial jewellery designs. I believe that a subsidiary design failing of both your and our jewellery industries is the practice of buying hack jewellery designs from French designers, whose business is producing designs for sale to all comers. This results in a lack of individuality in design and precludes the development of house styles.

If one looks at French jewellery in the great trade fairs, such as Basel and their own Bijhorca, one primarily notes the dependence on gimmicks and the use of masses of expensive stones, but not the unity of style and design inventiveness which is so evident in Italian, German, Danish and Finnish commerical jewellery collections.

To return to my main theme, the emphasis on fine art in American schools appears to affect the equipping and staffing of metalsmithing departments in that mechanical and production equipment is at a minimum and teaching staff or technicians who have had real industrial experience of the industry and its requirements are virtually nonexistant. In any case, by our standards, every department I have seen has been grossly understaffed. I am not criticising the teaching staffs of the metalsmithing departments. Most are dedicated teachers who devote far more hours to their students than they are paid for, but they are themselves products of the system, can only teach within the limits of their experience and have to cope with the frustrations of lack of equipment and technicians, limited budgets and understaffing.

The graduates from your better metalsmithing schools no doubt have a fine liberal arts education, they have great creative and innovative talents and sometimes extraordinary skills in obscure processes. All this can be seen by a casual glance at any copy of the *Goldsmiths Journal*, but let us take a harder commercial look at these creations.

As I said earlier, they are often ingenious, possibly very beautiful, sometimes witty and nearly all involve a great deal of painstaking hard work, even if made of nonprecious materials. How often, I wonder, do the makers of these extraordinary objects work out their real cost if a realistic price were to be charged for the

labour involved. Indeed, how many are capable of effectively costing their work anyway. I ask, how often would a woman wish to wear such bizarre pieces of jewellery, if they could be worn without damaging clothes or the risk of personal injury to the wearer. The only place for much of this work is in museums or private collections, and there must be a limit to sales in these areas.

Inevitably this type of work arises from the nature of metalsmithing departments. The fine art approach results in jewellery being treated as small-scale sculpture with little or no functional consideration. Technique and materials take second place to art and symbolism and the lack of equipment and technical instruction results in overemphasis on hand processes. These factors result in inordinate amounts of work being devoted to base metal items of no real value or the mixture of base and precious materials to such an extent that a potential buyer, rightly or wrongly, can have no idea of the intrinsic value of a purchase, apart from the artistic value.

Yes, I do know that most great works of art have little intrinsic value, but I suggest that the average student of metalsmithing does not aspire to be a Cellini, but most of them presumably do want to practice their craft in some way and they certainly want to eat. Thus you have an industry which though it may not recognise the fact, does have a need for trained designers and you have a vast overproduction of potential jewellery designers who have no interest in entering the industry, which in any case cannot use them without further training.

Perhaps we should leave well alone and let both sides go happily down their separate roads. But times are changing. I have pointed out the overseas competition which threatens the industry even though it is efficient enough to compete with any European manufacturers and if only it produced distinctive well-designed goods should be able to outsell any competition. As for the art school graduates,

You have an industry which . . . does have a need for trained designers and you have a vast overproduction of potential jewellery designers who have no interest in entering the industry . . .

as I said they need to eat. I understand that the traditional job market in teaching has dried up, few are capable of making a decent living as freelance artist/craftsmen and the new career of peripatetic workshop/demonstrator is rapidly becoming saturated and discredited by low standards. So why cannot these two sides who need each other come together?

I believe that far-sighted people on both sides are conscious of the situation and moves are afoot to do something about it. The fact that I have been invited to give a talk is indicative of a new climate of cooperation between RISDI and the Jewelry Institute. I would also like to acknowledge the long campaign conducted over the years by Stanley Lechtzin of the Tyler School of Art, who in a recent interview reported in the *Goldsmiths Journal* made a plea for cooperation in very practical terms.

The industry is facing a shortage of trained technologists, again due to failure of the public education system, and has been forced at very great expense to set up its own schools in Providence and New York to provide the type of training the industry requires. With the existence of these well-equipped schools and a growing recognition of the need for designers, I do not doubt that if the design training establishments do not change their ways and recognise the industry's legitimate requirements, the industry will enter this area of education itself.

This will not be so easy. The industry has technicians who can provide technical training but does not have designers equipped to provide a high level of design training and neither does it have the means to provide the necessary art background to produce well-rounded designers. This is where progressive colleges can give a service both to an important industry and to young people who may want to use artistic talent to make a decent living.

Of course all is not rosy on our side of the Atlantic. In England we also have an overproduction of academically trained designers, and in both our country and Germany there have been moves by the art schools to become more academic and less commercial in their outlook. In these countries, however, the education authorities have seen this trend and have taken steps to reestablish links with the industry by the setting up of sandwich courses in which students, in order to graduate, must spend a period on the order of six months or more working in the industry. Such requirements have long been mandatory in Denmark and Holland. We at the Goldsmiths' Company pioneered this kind of approach in jewellery and silversmithing in the U.K. by the establishment of our Goldsmiths' Graduate Apprenticeship Scheme some 8 years ago.

Observing the lack of understanding of college graduates by the industry and vice-versa, we set up a programme under which selected new graduates in jewellery and silver design work in jewellery factories for a nominal salary for a minimum period of four months. Normally graduates are rotated through as many different departments of the factory as feasible and, to protect against exploitation and to avoid union objections, neither design nor skilled benchwork are undertaken without special arrangements. In order to ensure that graduates are of use to the host companies, we stipulate that they produce evidence of having made relevant management or technical studies. This latter requirement was in fact primarily designed to persuade the colleges to introduce these studies into their courses. The scheme has not only oper-

ated in the United Kingdom, graduates have also been placed in Finland, Germany, Holland, France and Spain, and only the intransigence of the U.S. Immigration Service has prevented us from placing people here.

Over the years the scheme has proved its worth many times over. Manufacturers have been amazed by the speed at which graduates learn, their responsibility and their powers of observation. They have come to appreciate that the background knowledge imported by art school training has great value, even though practical values may be low. Firms who have never employed designers now do so because of their experience with the scheme.

The effect on the graduates has also been remarkable. Many who had no thought of joining the industry and perhaps saw the scheme merely as a means of delaying the evil day of having to face the world on their own, have opted to work in the industry, feeling they have something to contribute and something to gain. Curiously, some have taken up positions they would never have dreamed about, using their design background to operate in other areas of the industry, such as public relations, technical representation and precious stone management. Some have done what so many aspire to and set up their own businesses, and these have certainly been more successful on the average than those of their contemporaries who did not take part in the scheme.

There has also been an effect on the colleges, who now claim to be including more technology and management studies in their courses, though both we and the industry feel that in most cases there is a long way to go before really professional jewellery design/management material is produced by them. In fact, one failing of college courses which this scheme has shown up and of which we were not aware before, is a lack of training in professional ethics and general awareness of the hard facts of commercial life. Too many new graduates emerge from the colleges feeling that the world owes them a living and that they are God's gift to a world hungry for their avant-garde designs and dubious levels of craft skills. I am afraid that upgrading of humble diplomas to Honors Bachelor of Art degrees has tended in many cases to have given young graduates inflated ideas of their importance, without any increase in their competence.

So I return to the situation here. I urge the industry not to write off college graduates until they have made some effort to cooperate with selected colleges. I urge the colleges to take a look at themselves and consider the development of realistic courses which, while still providing a level of liberal arts background, will incorporate the necessary level of technical, professional and management studies which will give their graduates a chance of earning a living within the industry. I would go as far as to make the heretical suggestions that background art studies and drawing should be taught in a one- or two-year preliminary course and that the three-year degree course should be about equally divided between craft, design, technology and management.

I would like to suggest to students and graduates that three years in an art school does not make you a designer. The principles of design may be taught in three years, but to be a designer worthy of the name requires long experience in real design situations, analogous to the internship which is an essential part of the qualification of doctors and surgeons. Even the type of applied-art first degree course I have suggested will only provide a better background training for future jewellery designers than the present fine-art system, and on-the-job training would still be needed. Here I would suggest that a modification of the present post-graduate art degree might provide a means of producing much better qualified entrants to the industry.

Is it not possible for institutions such as RISDI, Boston University or other art schools located close to centres of the jewellery and silver manufacturing industry to seek the cooperation of large jewellery manufacturers to set up sandwich, post-graduate courses in which students divide their time between study at the teaching institution and working in the plants of industrial sponsors? I feel that time spent experiencing the realities of manufacturing processes would be of far more value to post-graduate students than the extraordinary practice of teaching undergraduates which appears to be quite a usual thing. Under such a system it could be made mandatory that Master's dissertations or theses are based on problems, processes or techniques arising in the sponsoring companies, and members of the management and technical staffs of the companies could be appointed external examiners, thus strengthening links between the industry and educational establishments.

Arrangements such as I have suggested would require a central coordinating body with a foot in both camps. In England this sort of function is fulfilled by the Goldsmiths' Company. Here you have the Jewelry Institute and I hope that it can be persuaded to take action in some way to bring together the educational and manufacturing establishments for the mutual benefit of all.

And so I conclude by repeating to the industry: Give the metalsmithing graduate a chance, you may be agreeably surprised. To colleges I say take your heads out of the sand and equip your students to take that chance. I think they will be grateful to you in the long term and I am sure the industry will be.

A wise engineer I once knew had carved over the portal of his factory: "Industry without art is brutality, life without industry is guilt." Would it not be a good idea to put up this text in both jewellery factories and art schools?

Peter Gainsbury is Director of Research in the Technical Department, The Worshipful Company of Goldsmiths, London.

Report from Vienna

International Jewelry 1900-1980
by Gary S. Griffin

The Kunstlerhaus (artists' house) in Vienna is unique in that it has been in existence for well over 100 years. During that time it has been completely under the control of the artists who make up its membership—they own the building and determine the activities which take place there. Kunstlerhaus, a home for all art, presents exhibitions of fine art and craft; almost every medium and conceptual viewpoint is represented.

The exhibition *International Jewelry (Schmuck International) 1900-1980,* on view at Kunstlerhaus from June 26—August 17 to coincide with the World Craft Council conference in Vienna, was curated solely by Peter Skubic, a Viennese jeweler who teaches in Cologne, Germany. He took responsibility for the installation and for the production of the fine catalog.

The exhibition, including over 150 works by contemporary artists together with a substantial collection of historical pieces, was the largest ever mounted at Kunstlerhaus. Skubic explained that his motivation for approaching such a monumental task was "to suggest to the public the possibilites in jewelry making."

Although the exhibition focused on contemporary jewelry, the historical section, assembled from the collections of the Schmuckmuseum, Pforzheim, the Kunstgewerbemuseum, Prague and the Osterreichisches Museum für Angewandte Kunst, Vienna, acted as a reference point for the viewer. It gave a sense of the progression of jewelry concept, design and technical execution from the beginning to the middle of the 20th century. Included here were important works by acclaimed masters, such as Lucien Gaillard, Georg Jensen, René Lalique and Josef Hoffman. Stylistically, Art Noveau and Jugenstile predominated. There was some Vienna Modern but little Art Deco, Streamline or Danish Modern.

As a middle ground between the historical and contemporary work, a number of important, influential jewelers, including a number of European as well as one Japanese, were shown. In most cases, the work was recent. Installed near the historical section, perhaps meant as "modern masters," were a group of metalsmiths, including Friedrich Becker, Yasuki Hiramatsu, Emmy van Leersum, Bruno Martinazzi, Arnaldo Pomodoro and Reinhold Reiling. Of disappointment was the fact that none of the significant, influential Americans of this period were shown.

The exhibition included the work of 12 contemporary Americans: Jamie Bennett, Robert Ebendorf, Arline Fisch, Garry Griffin, David Keens, Mary Lee Hu, Hiroko Pijanowski, Eugene Pijanowski, Robin Quigley, Gayle Saunders, Miriam Sharlin and Marci Zelmanoff.

The American work was easily recognized. While the European pieces often appeared delicate, light and airy, the American work suggested a more massive quality. This was primarily due to a difference in the use of positive and negative spatial relationships and a difference in the approach to scale. This massive quality was translated in the American work as emphasis on positive spatial relationships with little use of negative space. The Europeans, on the other hand, emphasized negative space with thin wire and sheet. Generally, the American work was larger and more aggressive in its relationship to the body than its European counterpart, that is, the ornament demanded as much attention as the body. The European pieces were more delicate and subtle as ornament, suggesting rather than demanding attention.

This is not to suggest that the American work was insensitive to human scale, nor that I preferred the European to the American work. I am merely trying to elaborate on what I considered to be some distinctive points of view. Differences were also apparent regarding the approach to design. Good design, specifically regarding formal elements and their application in a piece, appeared to be a European trait. I found good design and, in most cases, inventive design, to be an end in itself in the European approach. The work was the design. Conforming to the rules of design was absolute.

This was significant when compared to American use of imagery or narrative. Here the hierarchy changed. The image became important; concept displaced the formal elements. The artist's personal philosophy was predominant, not predicated upon a design idea.

The European work appeared far more minimal than the American. It represented a design distillation process, which resulted in a reductivist esthetic. The American work appeared excessive in comparison, because the image was of primary importance. Elements were added for their meaning, their ability to convey message and their symbolic quality. This process, in most cases, required more than simply a beautiful line or a nice shape. In general, the exhibition reaffirmed the concept of jewelry as functional. This statement, while appearing simplistic, is significant. The past decade has seen a serious questionning of the nature of jewelry. We have been exposed to antijewelry, body jewelry, body sculpture, and so on. This exhibition was clear evidence of an almost unanimous decision amoung jewelers to make wearable, functional pieces. Not all the contemporary work in the exhibition was recent. Some of it dated from the early 1970s. However, by their selection, the jewelers reaffirmed their interest in function.

Of equal significance was the broad use of materials. Various plastics, minerals, rubber, metals and other media all pointed to the fact that contemporary jewelry is not necessarily relegated to gold- and silversmithing. Fabrication methods were also diverse. Hand methods predominated. However, more exotic techniques were often employed, thus confirming that any process is acceptable for the contemporary jeweler.

In approaching an exhibition this large, one must rely upon subjective judgement in selecting what is most interesting. Much of the work was beautiful. There were attractive designs with wonderful progressions, repetitions and tensions. But, in the end, I was drawn to work that was thought-provoking, beyond materials and processes. Therefore, I have chosen to discuss the work of Pierre Degen, David Keens, Otto Kunzli, Robin Quigly and Wolfgang Rahs.

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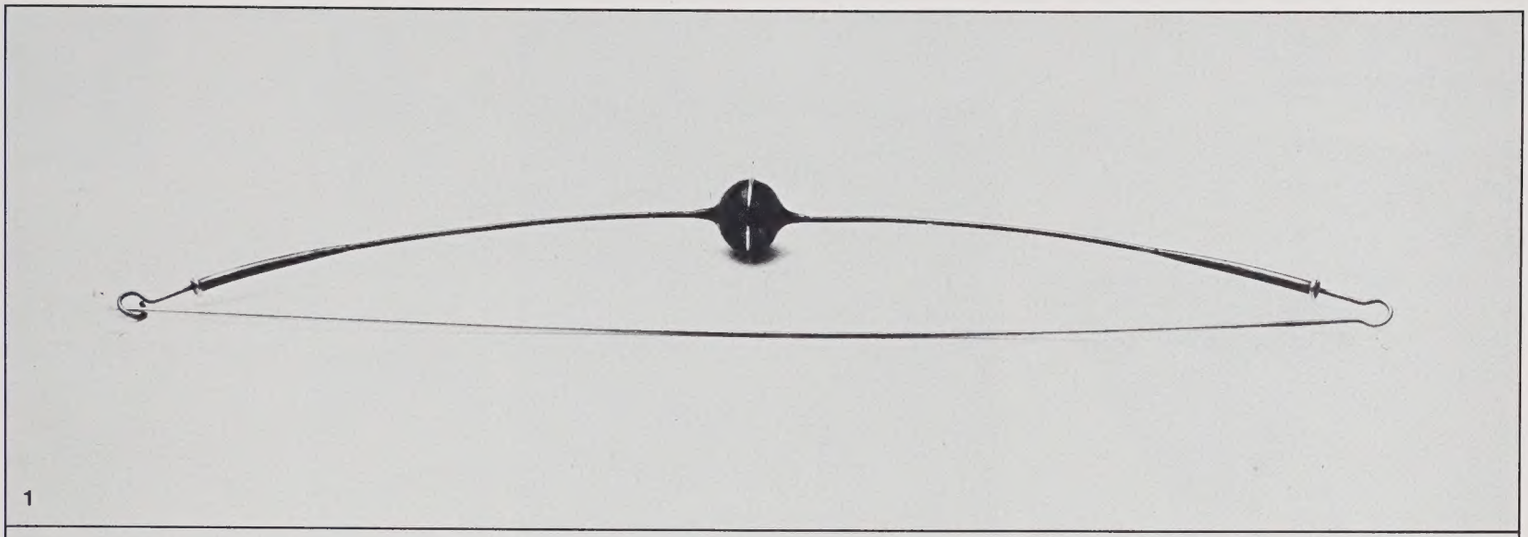
2. Veronika Schwarzinger, *Brooch*
3. Ichiro Iino, *Brooch*
4. Friedrich Muller, *Ring*



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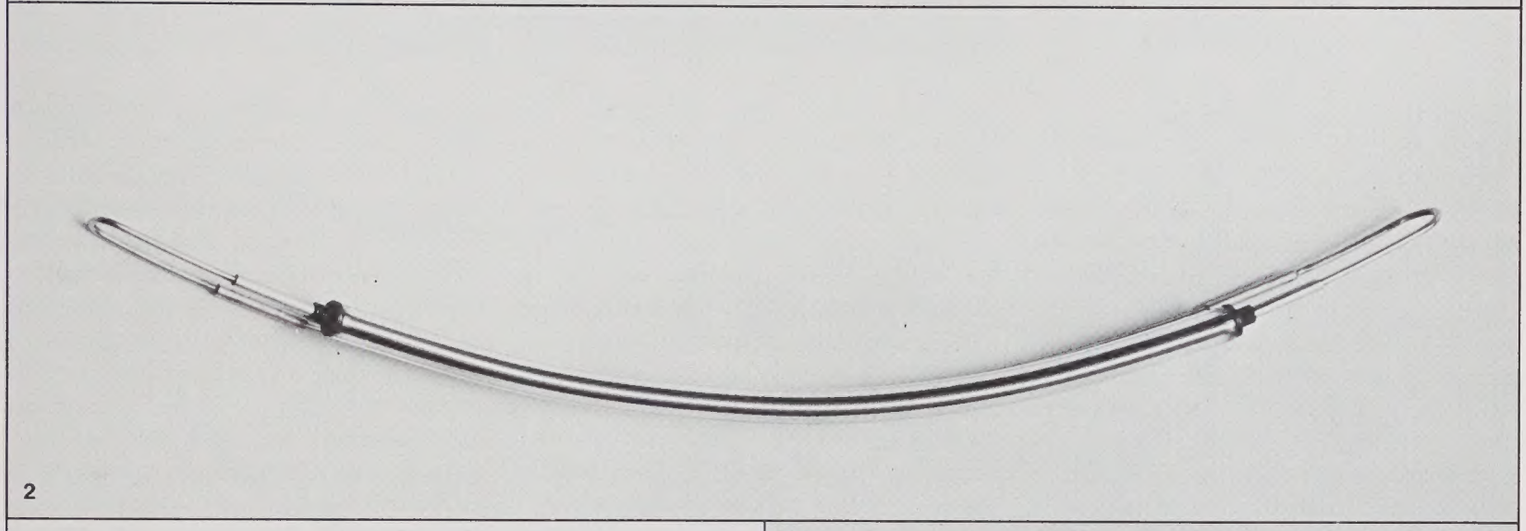

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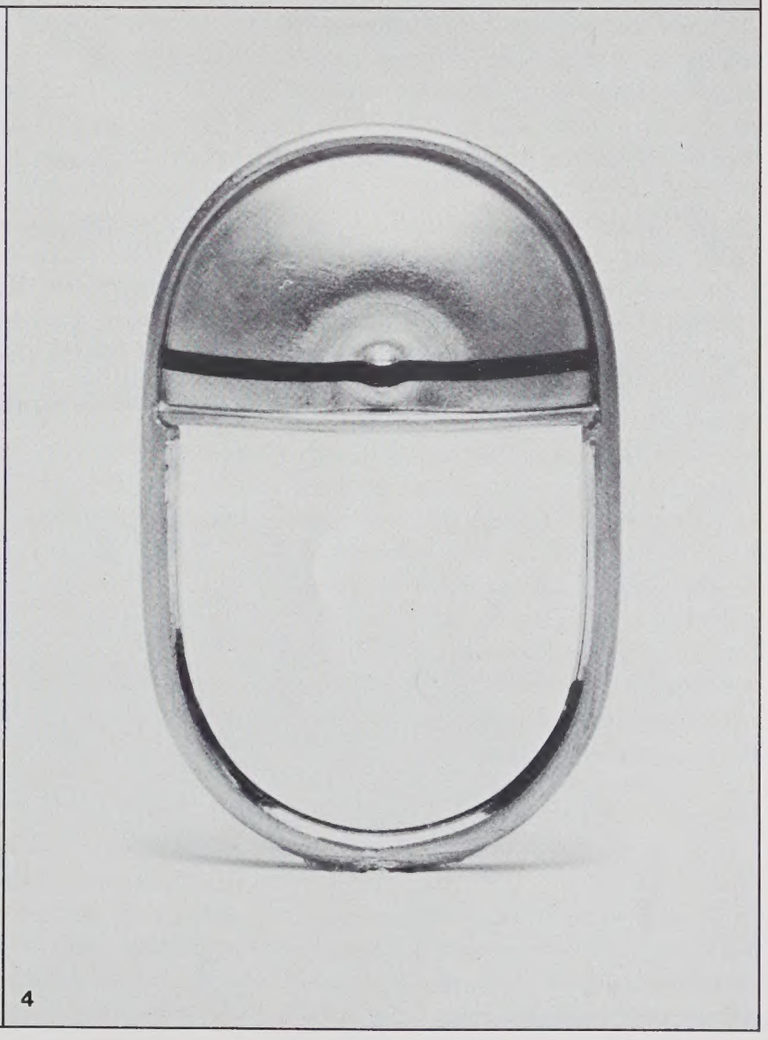

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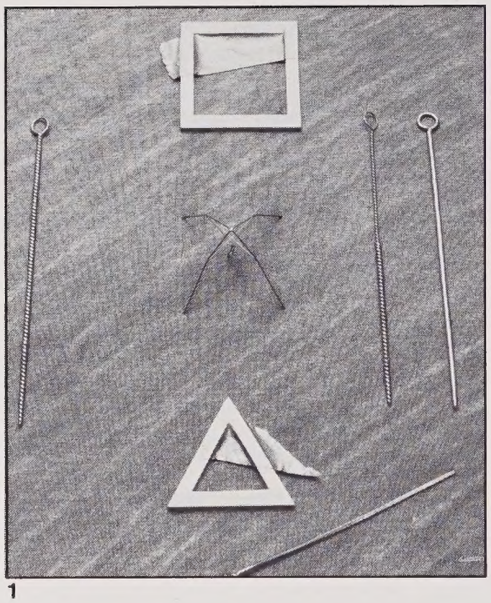
1. Pierre Degen, *Object*
2. Wolfgang Rahs, *Brooch*
3. Otto Kunzli, *Namensschild*
4. Robin Quigley, *Pendant*
5. David Keens, *Brooch*



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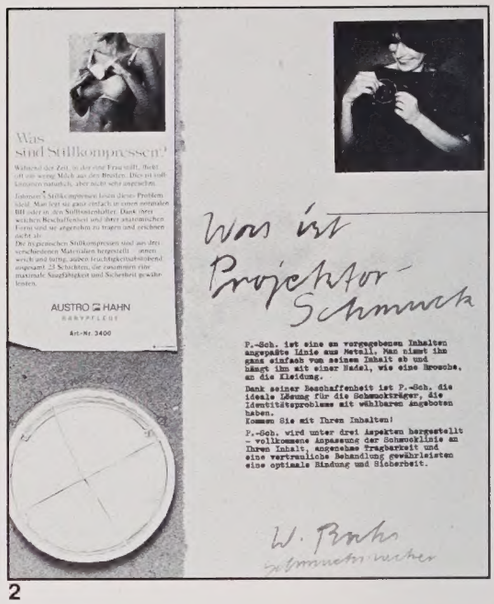

Was ist Projektor-Schmuck
P.-Sch. ist eine an vorgegebenen Inhalten angepaßte Linie aus Metall. Man klemmt ihn ganz einfach von seinen Inhalt ab und hängt ihn mit einer Nadel, wie eine Brosche, an die Kleidung.
Dank seiner Beschaffenheit ist P.-Sch. die ideale Lösung für die Schmuckträger, die Identitätsprobleme mit wählbaren Angeboten haben.
Kommen Sie mit Ihren Inhalten!
P.-Sch. wird unter drei Aspekten hergestellt – vollkommene Anpassung der Schmucklinie an Ihren Inhalt, angenehme Tragbarkeit und eine vertrauliche Behandlung gewährleisten eine optimale Bindung und Sicherheit.
W. Rahs

2

Pierre Degen

Pierre Degen's "Object" used a rectangle on which to attach a number of elements. The choice of the rectangle was arbitrary, not unlike the painter's choice of a square canvas, which provides a field or stage upon which an event takes place. The elements that Degen chose to attach to the rectangle were varied. Some were finished pieces of jewelry, others three-dimensional sketches. Some were very refined, others less so. This polarity was most interesting as it was apparent that Degen was attempting to achieve a random order, perhaps chaos. Though not entirely successful, since I perceived a residual order in the placement of the elements, it was exciting to see this approach in progress. To some, this goal may have seemed awkward. Perhaps it was, but the vitality of the work that resulted was penetrating. It pointed to a refreshing and exciting dimension in contemporary jewelry.

David Keens

David Keens exhibited a number of pieces, two from 1978 and 1979 and three recent works. Although all of his pieces were united thematically, the newer ones reflected an alteration of the intensity of his imagery. In his earlier work, Keens used recognizable, rather poignant symbols, such as pins rammed through blocks of heavy aluminum bars with a drip of red resin added as detail. This direct and confronting imagery has given way to a more subtle, formal statement. Although Keen's work has always been classical in terms of design format, the new work tended to emphasize that quality more. Perhaps this was due not only to the absence of the immediately recognizable symbols, but also to the adherence to a more minimal design concept. Keen's new work was a refreshing departure in his already well established esthetic.

Otto Kunzli

Emphasizing minimalism and "less is more" attitudes would be an accurate appraisal of the visual qualities of Otto Kunzli's work. However, upon inspection, one found more than simple shapes. Kunzli exhibited a thorough understanding of jewelry as ornament. He also questionned the suitablity of materials for wearing. An example of this is apparent in the work illustrated here. In this case Kunzli chose rubber and gold as materials. Their importance here was not in the alternative use of materials so much as in their interdependence and function, which formed a total harmony. This interdependence was manifested in the fact that the rubber was the tension device while the gold was the hook. The hook could not work without polarity of tension. The work effectively dealt with jewelry, because wearability was considered. It was a clear, concise and incisive design statement.

Robin Quigley

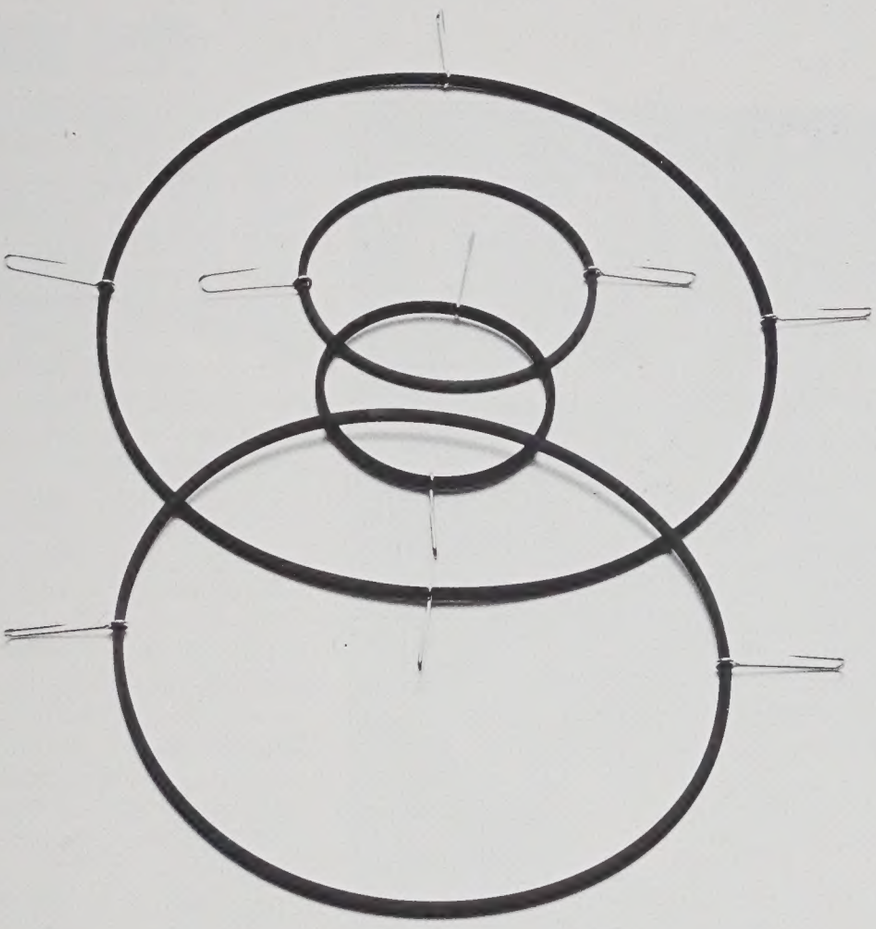
Robin Quigley's unique work, while formal, had a light, animated, playful quality, due to the organization of space. In general, the exterior shapes were geometric, which offered stability and organization—formality—to the piece. The overall placement of these shapes reinforced traditional jewelry formality. But the classic, formal qualities stopped there. Dancing or jumping across almost every surface were animated, anonymous elements: checkerboards, squiggles, dots and dashes performed as characters in a delightful fantasy. Adding to this wonderful paradox of solid, stable forms and indeterminate, slippery shapes was the choice of materials. While the stable, geometric structures were fabricated from metal, the animated interior forms were assembled from multicolored plastics. The hard and unyielding combined with the soft and flexible reinforced Quigley's concept. Quigley's work presented a unique, mature esthetic. While incorporating seemingly harsh, impersonal materials and shapes, she managed to present a warm and charming statement.

Wolfgang Rahs

Although most of the work here had some conceptual base, there was a small section that primarily projected concept. Most was unsuccessful, usually resulting in banal rhetoric. An exception was the work of Wolfgang Rahs. While being immediately recognizable as jewelry, the work simultaneously projected the artist's questionning of the history of jewelry and the nature of body ornamentation. The result of the linking of these ideas was work that satisfied all the requirements of jewelry and yet confronted the wearer and viewer with provocative questions. The success of Rah's pieces was further advanced by his accomplished sense of presentation: generally photographs and written text accompanied the work. The approach was totally divorced from "the work should speak for itself" argument. One could certainly question these methods: Was writing about the concept necessary? Why did the artist need photographs? For me, the work was more easily understood through these devices; they did not appear to be a philosophical gimmick. Most interesting about this work was its sensitive understanding of jewelry and its traditional uses and attitudes; it was not isolated. This recognition of tradition within contemporary work is of utmost importance and it is significant and unusual that work can address the formal lineage of jewelry, current attitudes of ornamentation and concept as primary element simultaneously. Unfortunately, in my opinion, Rah's work was not of master metalsmith status. This is not to say that the work was poorly made. The workmanship was excellent. However, it did not speak about materials and processes. The work presented a more humble, unassuming approach to design and manufacture, a strength which could have reinforced the concept. Rah's work was dynamic and important. It stood out in the current deluge of poor work legitimatized as "conceptual."

An excellent catalog of this exhibition is available from: Kunstlerhaus, A-1010, Karlsplatz 5, Vienna, Austria. The cost of the catalog is AS (Australian Shillings) 200 and the air mailing cost is approximately AS160. To order a copy, I suggest sending an international money order in the amount of AS360 to Kunstlerhaus and requesting that a catalog be air mailed to you.

Gary S. Griffin is an assistant professor at the School for American Craftsmen, Rochester Institute of Technology. He has exhibited his work widely in both national and international exhibitions.



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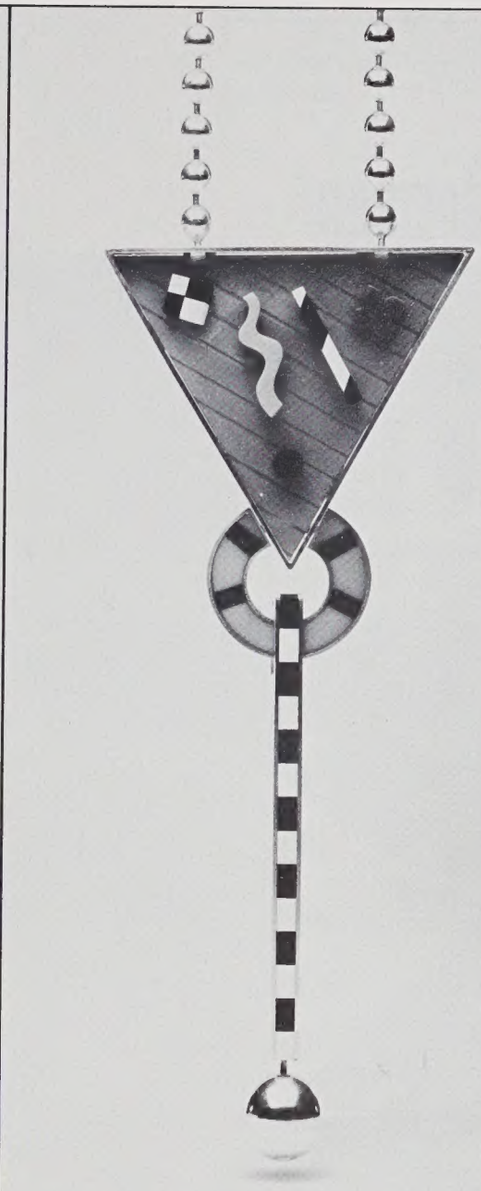

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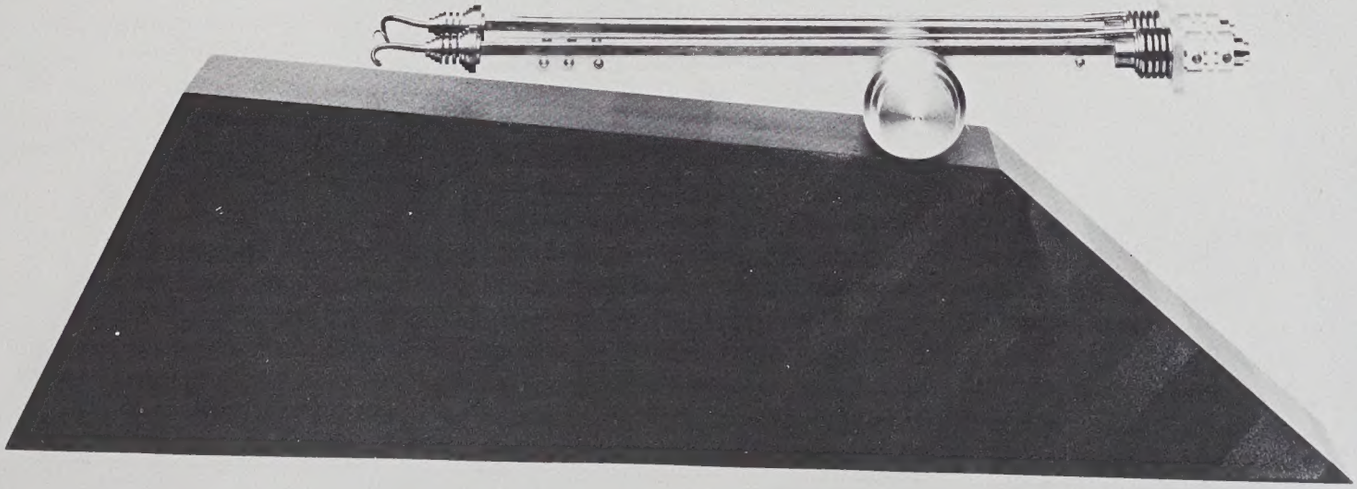

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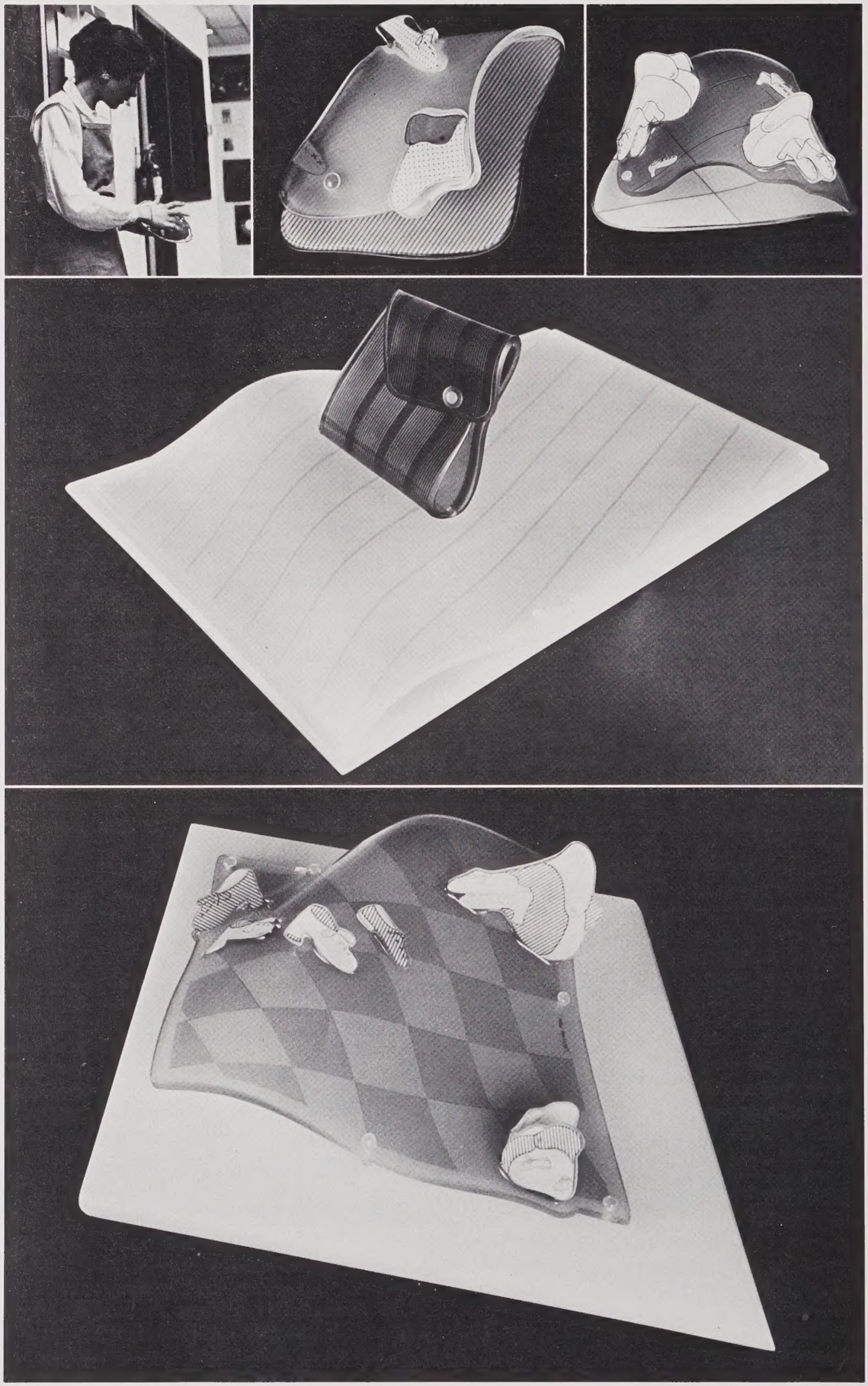
AMY DAVISON



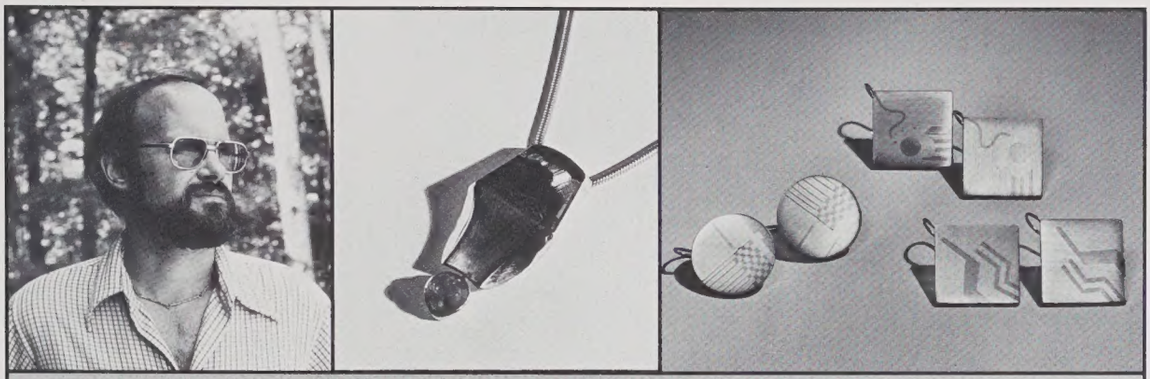
Received her B.F.A. in metal from Tufts University/Boston Museum School, 1976, her M.F.A. in metal at Tyler School of Art, Philadelphia, Pennsylvania, 1978. Currently visiting assistant professor of metal/jewelry in The School for American Craftsman, Rochester Institute of Technology. Recent exhibitions include: *Invitation Exhibition,* Craft and Folk Art Museum, Los Angeles; *International Armschmuck,* Schmuckmuseum, Pforzheim, West Germany; *Metal Invitational Exhibition,* Synopsis Gallery, Winnetka, Illinois; *Greenwood Gallery Inaugural Exhibition,* Washington, D. C.; *Pensacola Craft Invitational,* Pensacola, Florida; *Plastics Invitational,* Gallery of Contemporary Metalsmithing, Rochester, New York; *Young Americans: Metal,* American Craft Museum, New York, 1980.

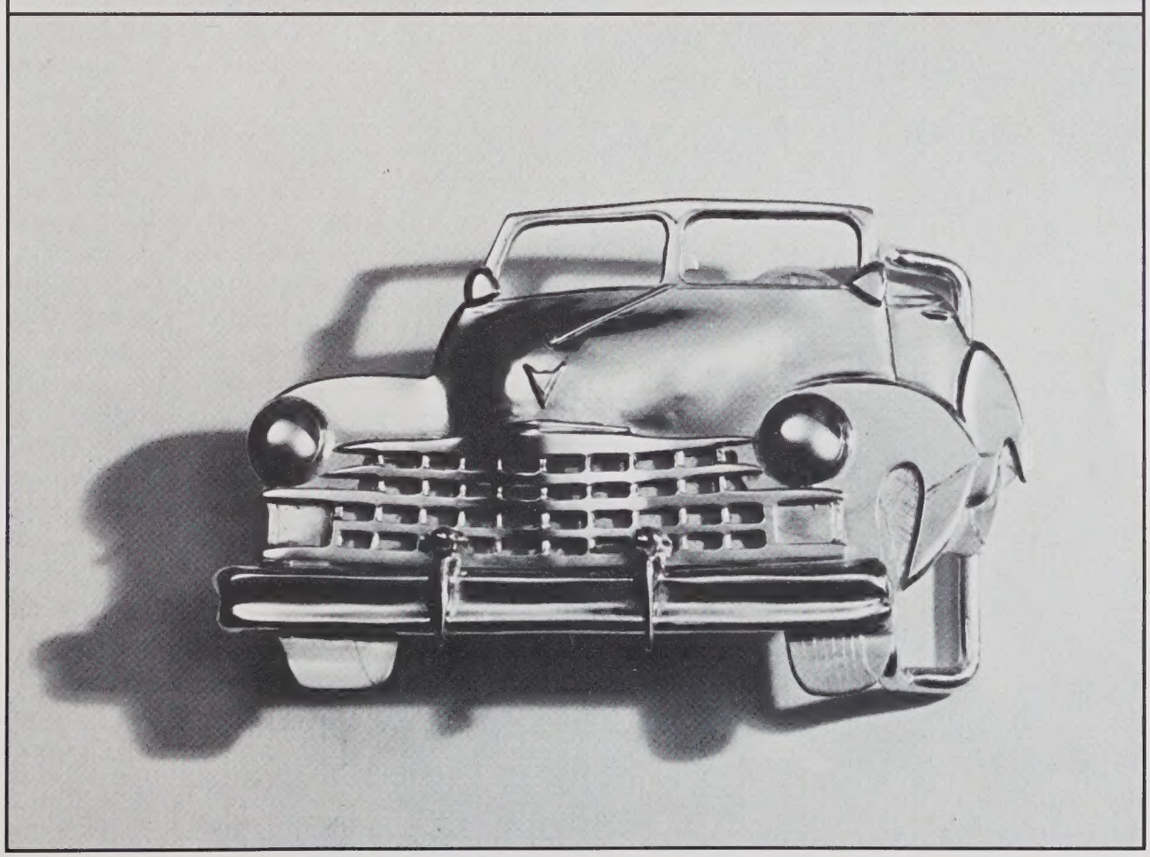
Statement:

I would like to address myself to my current exploration into plastics and the incorporation of other materials. I feel that translating one's ideas into various media can open exciting possibilities. Certainly, we've all seen this in Picasso's work in numerous materials, in Salvador Dali's metalwork and in Fabergé's work in rock crystal. Metalsmiths have seen generations of traditional combinations using metal with enamel, ivory, wood, gems and so on. To me, one of the most exciting aspects of viewing contemporary crafts is the distinctive overlapping and mixture of media.

Above left: *Animation Series Pin,* plastics and drawing, 4x3x1"
Above right: *Sculptural Piece 2,* plastics, 6x6x5", 1980
Center: *Sculptural Piece 4,* plastics, 1x1x1½', 1980
Below: *Sculptural Piece 3,* plastics, 1x1x1', 1980

MARK KNIPE





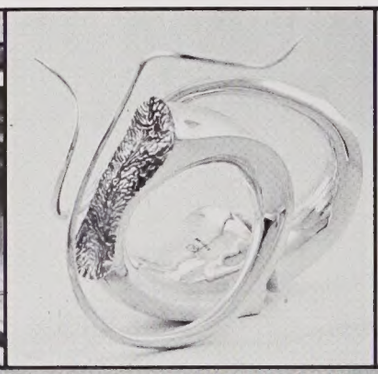
Received his B.S. in Art Education at Pennsylvania State University, 1965; took Graduate Courses in Art History at Tyler School of Art, 1967; since 1969 has continued independent study in metalsmithing, attending lectures and workshops. Currently works as an independent goldsmith in New Hampshire. Recent exhibitions include: Northeast Craft Fair, Rhinebeck; Juried Multimedia Exhibition, League of New Hampshire Craftsmen; *Eating by Design* invitational, Philadelphia Art Alliance, 1980; *Contemporary Jewelry of Mark Knipe,* Foree-Johnson Gallery, Chapel Hill, NC; *Group Show of New Jewelry Collections,* Yellow Door Gallery, Tenafly, NJ; *Objects 79* Gallery, League of New Hampshire Craftsmen; Baltimore Winter Market, 1979.

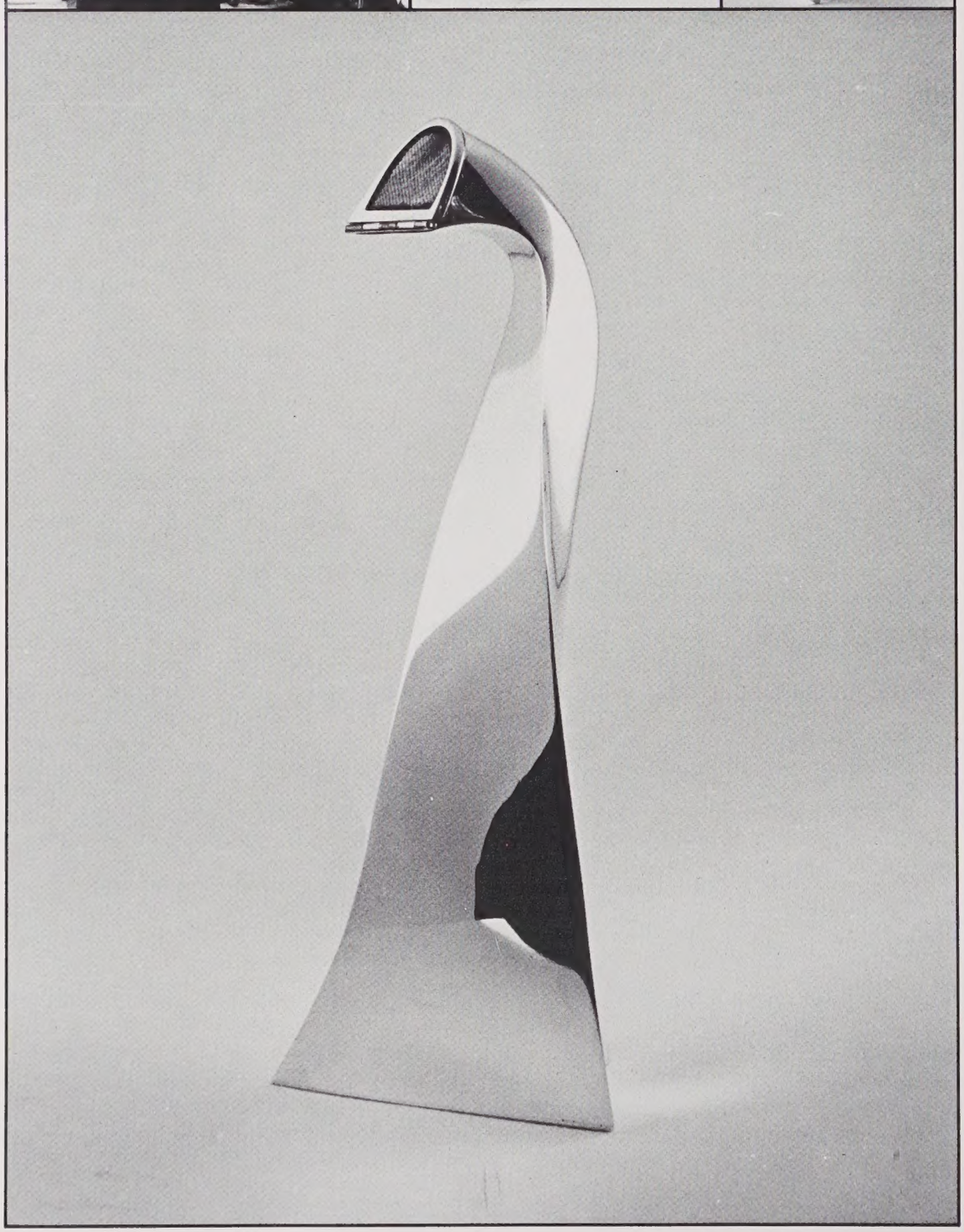
Statement:

I feel lucky to live in a time and place that allows me to make a living doing what I enjoy most.

Above left: *Pendant,* sterling silver, chrysocolla, 1x2", 1979. Photo: Bill Finney
Above right: *Earrings,* sterling silver, copper, nickel, 14k yellow gold, married metal, engraved, 1x1". Photo: Bill Finney
Center: *Rings,* 14k yellow and red gold, grossalar and rubilite garnets, 1979. Photo: Bill Finney
Below: *Cadillac Convertible* belt buckle, sterling silver, 3x2", 1980. Photo: Bill Finney

RONALD WYANCKO





Received his B.F.A in jewelry and silversmithing at the University of Kansas, Lawrence, 1961, his M.F.A. in design, jewelry and silversmithing at Arizona State University, Tempe, 1969; also has an M.A. in Secondary Art Education, 1964. Currently assistant professor of art at James Madison University, Harrisonburg, Virginia. In 1979 and 1980 received research grants from James Madison University. Recent exhibitions include: *Virginia Craftsmen Exhibition,* Virginia Museum, Richmond; *Virginia-Carolina Craftsmen Invitational,* Martinsville, Virginia; *Bank of Virginia Invitational Crafts Exhibition,* Norfolk, Virginia; 1978–1980.

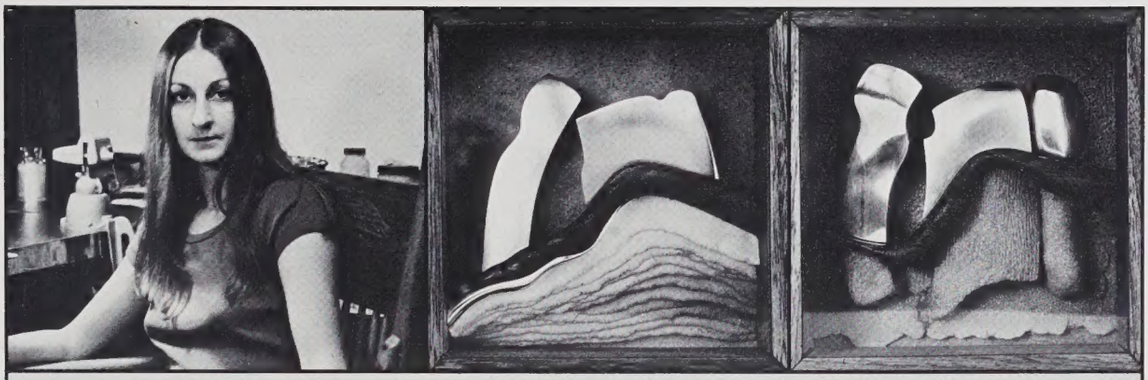
Statement:

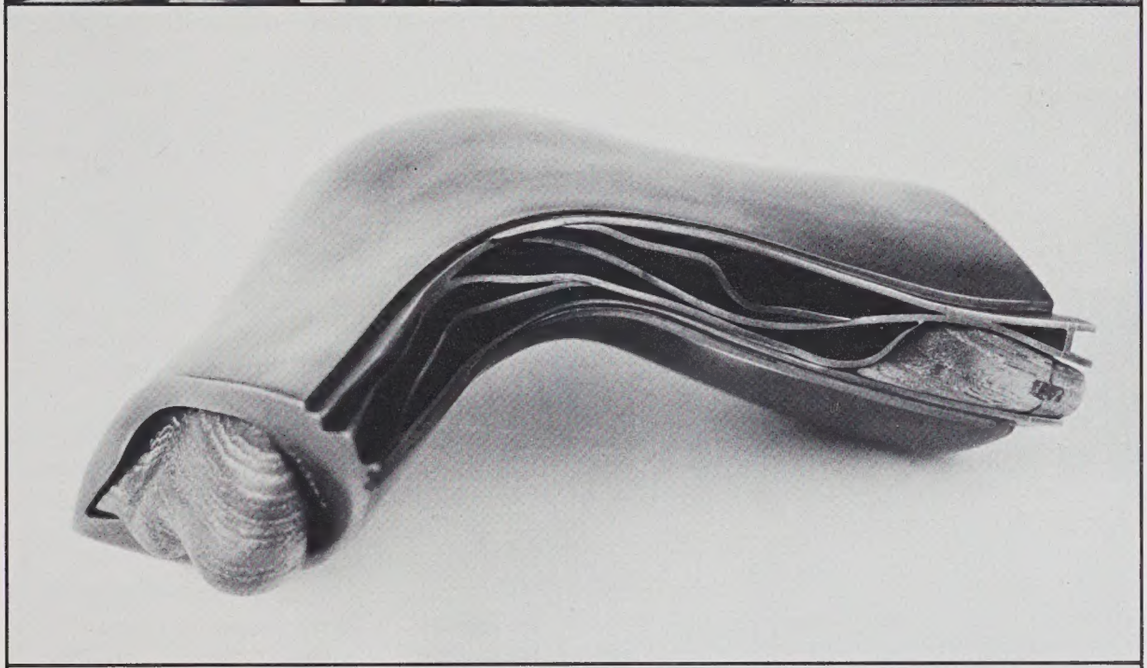
Three factors have been most important in my development as a metalsmith: First, the support and encouragement I received from Carlyle Smith while studying at the University of Kansas; second, my own persistence in working consistently over a long period of time through periods of personal difficulty and third, my interaction with many outstanding metalsmiths, which has renewed my efforts and exposed me to new techniques and concepts.

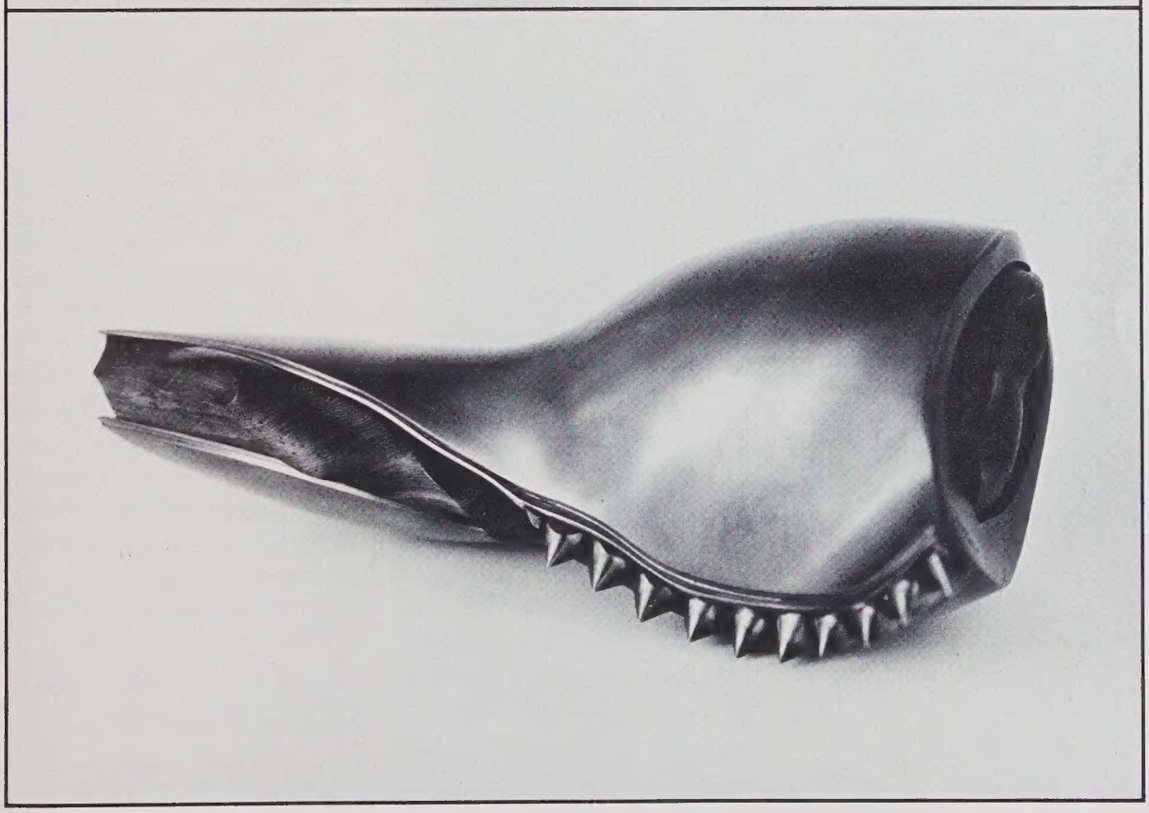
The sculptural objects I have been working on recently are reliquary objects for the spirit. They feel comfortable to me. Space on the inside is compatible with the form on the outside. Some surfaces are enriched with inlaid wire or textured metal, but the surface does not interfere with the form. They have no top or bottom to spoil the upward movement of the work. Tubes become inside passageways connecting one compartment with another. A tube at the top is open and allows access to the outside. The object serves no purpose except to please my spiritual need.

Above left: *Ramous,* a shell structure using reticulated and sterling silver, 6x8½x5", 1980
Above right: *Urn,* sterling silver shell structure, 14x10x5", 1980. Photo: the artist
Below: *Container,* fine silver, silk, woven tapestry by Barbara Wyancko, 8x3½x4", 1979. Photo: the artist

NADENE R. WEGNER







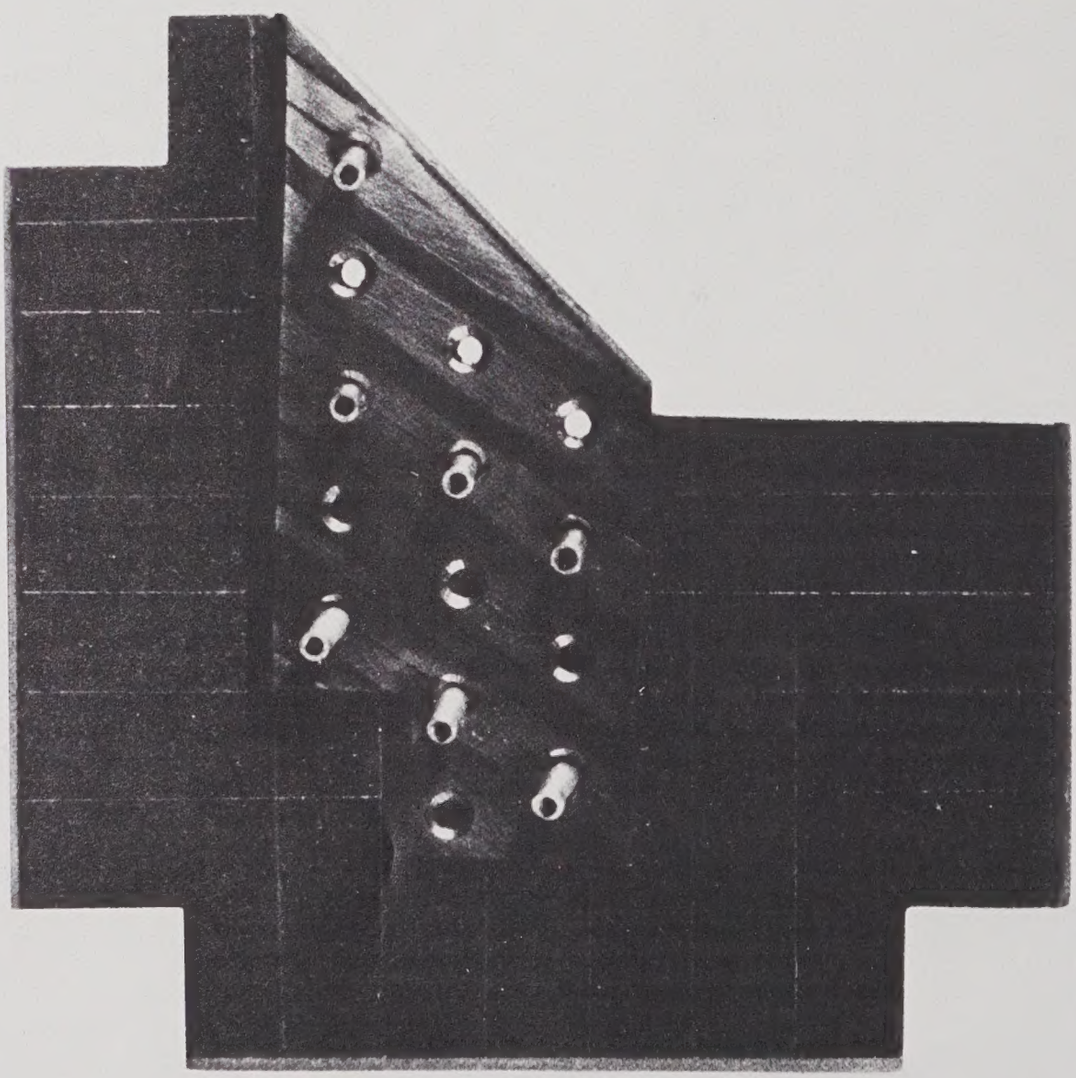
Received her B.F.A. at the University of Wisconsin/Milwaukee in metalsmithing and jewelry, 1972, her M.F.A. at Tyler School of Art, also in metalsmithing and jewelry, 1975. Currently assistant professor of metalsmithing and jewelry at Louisville School of Art, Anchorage, Kentucky. In 1977 was awarded the Wisconsin Arts Board Grant for Visual and Literary Arts. Has recently exhibited in *Young Americans: Metal* at the Museum of Contemporary Crafts, 1980; won awards at the Second and Third *National Ring Shows* in Athens, Georgia, 1978 and 1979; and exhibited at the *Ball State Metal Invitational* in Muncie, Indiana, 1979.

Statement:

I feel that my work has progressed in a fairly logical (perhaps too much so) manner in the last 10 years since I took my first metal course. The Boxed pieces began as a diversion and now that progression has ended and I am beginning to tread on conceptually unknown ground, which has been very exciting, yet a bit scary. I have always enjoyed paper, not as a surface to apply things to, but as an edge, how it rips. I hope to continue to use it for the work still in my head.

Above left: *Series of Boxed Objects, 4,* copper, sterling silver, walnut, paper, glass, 4x4x1¾", 1980
Above right: *Series of Boxed Objects, 5,* copper, sterling silver, walnut, paper, glass, 4x4x1¾", 1980
Center: *Object,* copper, teak, 4⅞x2x4", 1980
Below: *Exuding Penetration,* copper, amaranth wood, 7¼x2½x3¼", 1979

KAY Y. YEE



Received her B.F.A at California College of Arts and Crafts, Oakland, 1973, her M.F.A. at California State University, Long Beach, 1977. Currently teaches at East Los Angeles College, Monterey Park California. Has just completed a 10-month study and lecture tour to 19 countries, including Switzerland, Nepal and China. Recent exhibitions include: *Cooper 2,* Museum of Art, University of Arizona, Tucson; *California Metalsmiths,* Gallery of Contemporary Metalsmithing, Rochester, NY; *The State of Metals,* Visual Arts Center of Alaska, Anchorage; *Young Americans: Metals,* American Craft Museum, New York; *Art for Use,* Lake Placid, New York and American Craft Museum, 1980. *New Year/New Show,* Los Angeles County Museum of Art; *Sculpture Invitational Exhibition,* Weber State College, Ogden, Utah; *The National Metals Invitational,* Anchorage, Alaska; *New Work, One-Person Exhibition,* Alice Benjamen Gallery, Santa Barbara, California, 1979.

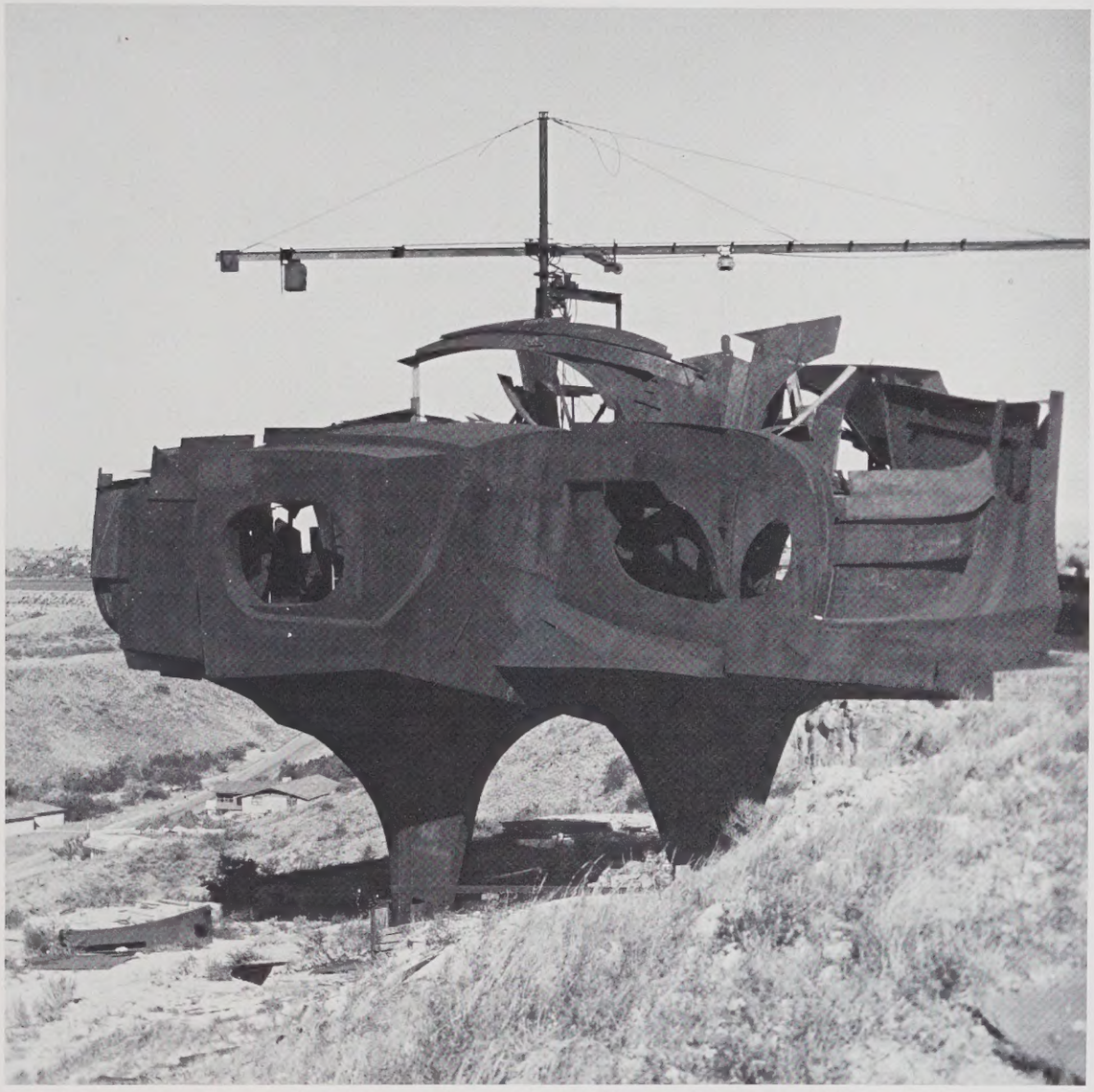
Statement:

It's difficult to say why I do what I do. I just think it's a crazy obsession.

Above left: *Untitled X,* aluminum, copper, steel, paint, 13x13"
Above right: *Bits of a World Long Gone,* 11x11"
Below: *No Square 2,* brooch, brass, copper and wrinkle-finish paint, approx. 2x2"

Robert Bruno: A Sculptor at Home with his Work

text and photos by
Elizabeth Skidmore Sasser

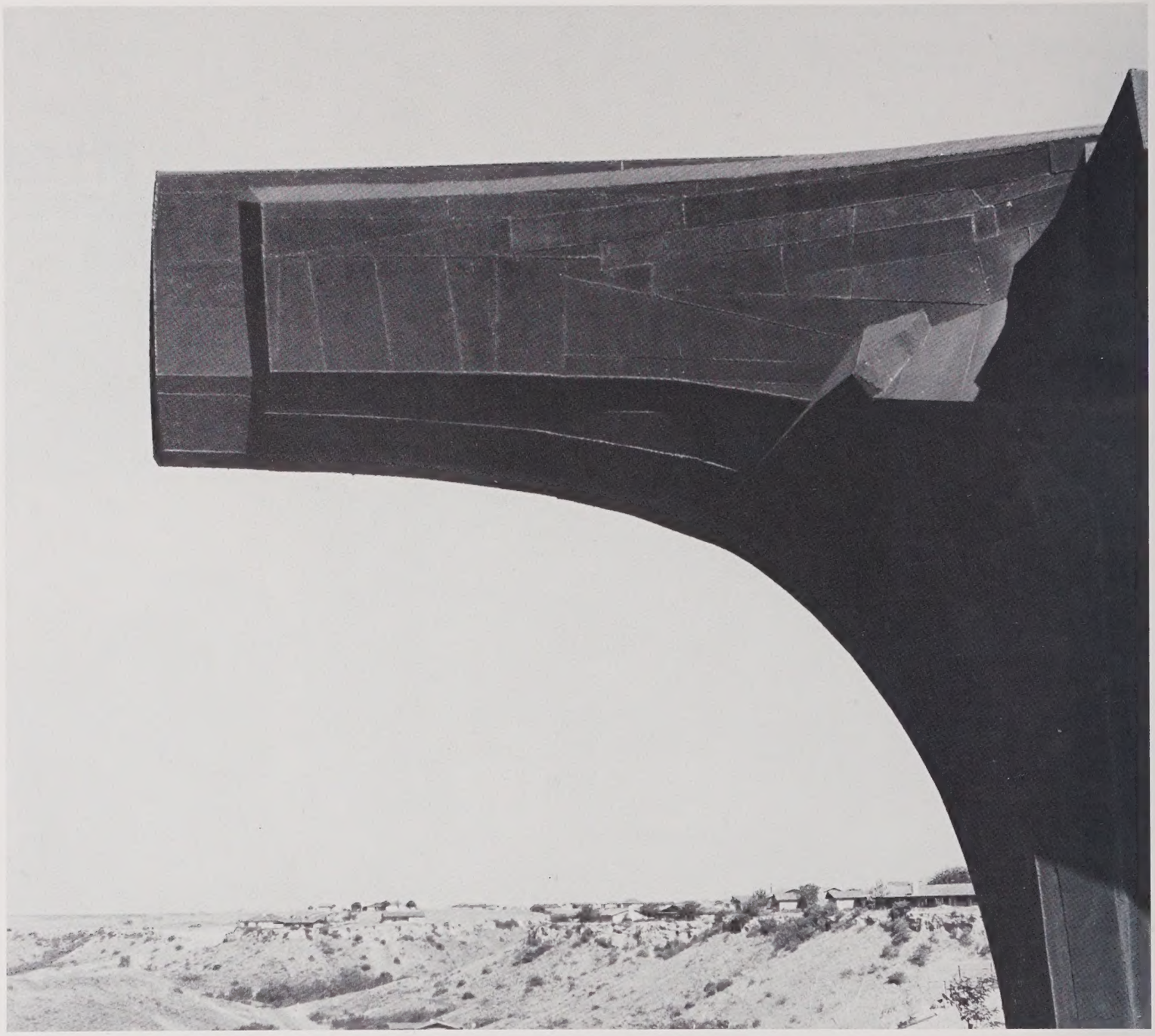


Robert Bruno's *House as Sculpture*. Welded Corten steel, approx. 60' high at highest point by approx. 90' long. Fall, 1980

Robert Bruno

West Texas is usually characterized as a landscape of flat, unyielding plains, dotted in September with fluffs of white cotton growing in fields where irrigation permits crops to mature. Close to Lubbock, however, there is a sudden plunge in the land level. Between cliffs and outcroppings of the Caprock, Lake Ransom ripples serenely in the arid atmosphere. On an escarpment, 155 feet above the water, a plated steel form is slowly rising on four legs like an ancient dinosaur. The welded pod assumes a new dimension when it becomes evident that this sculpture is a shelter as intriguing as Schwitter's Studio, destroyed during the second World War, or Kiesler's plan for an "endless house."

The sculptor of the "fantastic architecture" is Robert Bruno. A graduate of Dominican College in Racine, Wisconsin, he holds a Master of Fine Arts degree from Notre Dame, where he majored in sculpture and served as an assistant to metal sculptor, Konstantine Milonadis. Before accepting a teaching position in the Division of Architecture at Texas Tech University, Bruno was a professional goldsmith in Los Angeles. Not long after his arrival on the South Plains of Texas, he began a large welded sculpture in the courtyard of the architecture building. Students and faculty, watching the daily transformations, witnessed an interlacing of latter-day Gothic arches or what might have been the construction of a lofty baldaquino to protect an altar for a race of giants. While assembling this and other large metal pieces, Bruno says he began to imagine the pleasure of living in one of his sculptured environments. Refusing to accept the idea as impossible, six years ago he acquired one of the most dramatic sites



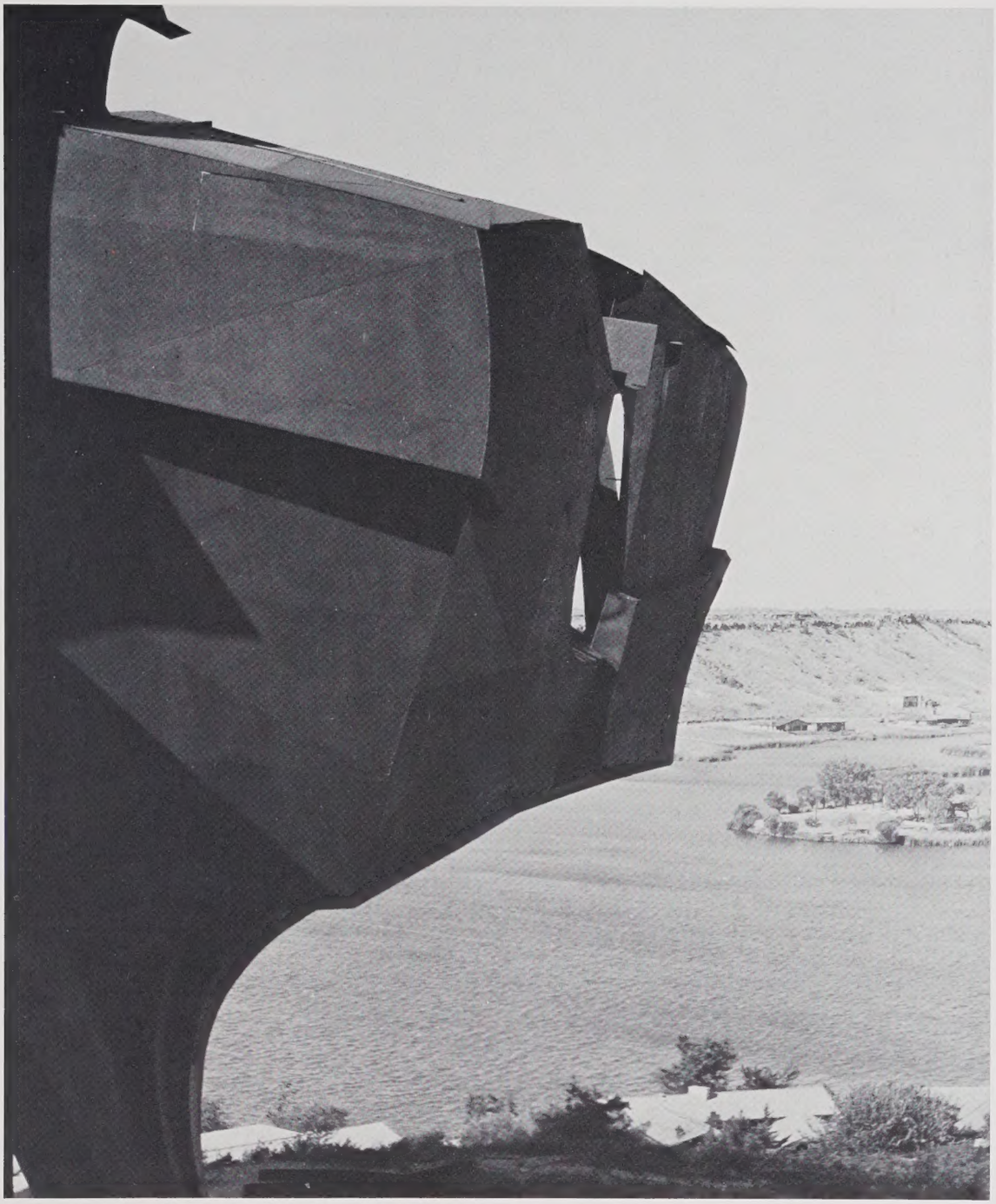
The view from Robert Bruno's house

in the region and started work on a house/sculpture. As the sole participant in the project, which moves upward plate by plate from a stockpile of 80 tons of steel, Bruno spends 10 or 12 hours a day on the construction. His enthusiasm is unflagging. He is not eager, even after such a long passage of time, for the work to be finished. "The fun," he explains, "is in the act of building, not just in the possession of the final product."

Centered at the heart of the structure, like an antenna of a space ship, there is a hydraulic crane, designed by Bruno, for lifting the steel to the gradually increasing heights where the welding operation occurs. The walls are fabricated from 1/2" thick steel segments assembled in a variety of double-curved surfaces. "Each plate," Bruno notes, "is flexed and tack-welded into place; none are bent. The linear distortion which takes place in a weld, or cut, is used as much as possible to further form the concave or convex plane." He continues, "The various loads are transferred through the metal skin to the legs and then to the ground."

At first glance, sculpture seems to triumph over the function of "house," but the sculptor/architect reassures the doubter by pointing out that the curving walls when finished will contain 2,300 square feet of living space. The free form enfolds two bedrooms and baths, a dining room, living room, kitchen, and loft/guest room. Working without a scale model, or formally drawn plans, Bruno wishes to leave the possibilities for change and expansion open-ended. He also feels that the complexity of the design would be hampered by the frozen-in-place aspect of the usual architectural procedures. Discussing his methods, he says, "At first, I thought that after the halfway point was reached the structure would start telling me what to do; but as I go along the possibilities seem to be augmented rather than diminished. I find that I am not limited at all. Originally, I thought that the outside was the sculpture and I hoped for some space left over on the inside for living. As I worked, I saw that the inside and outside were one."

For the influx of visitors the monumental corten steel shell poses a puzzle. It draws curious bystanders like a magnet draws iron filings. Of his audience, Bruno observes, "Even if they don't understand or appreciate my forms or shapes, they seem to like the fact that I feel the sculpture is impor-



This sculpture is a shelter as intriguing as Schwitter's Studio, destroyed during the second World War, or Kiesler's plan for an "endless house."

tant. I think that's the problem with too many artists today—they don't think what they're doing is important."

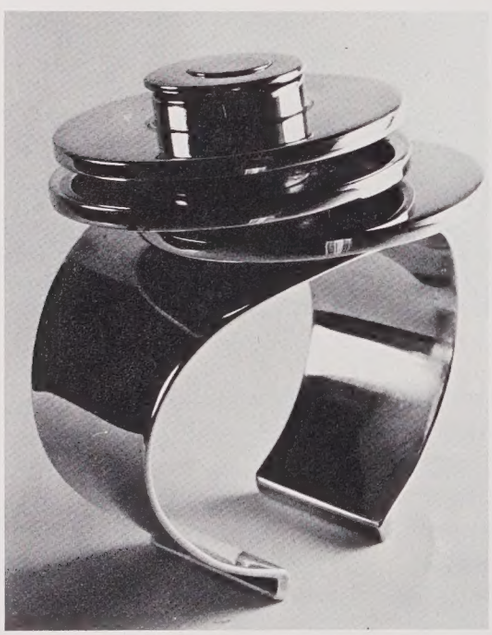
The Lubbock landmark has attracted the attention of feature writers for papers as far removed geographically as the *Washington Post* and the *London Sunday Times.* In 1978, an exhibition of photographs of the work in progress was displayed in the Palace of Fine Arts in Mexico City as a part of the International Architectural Congress assembled in the Mexican capital. During the same period, the architect was invited to lecture on his work. A photographic history of the house/sculpture was recently shown at the Fine Arts and Collector's Gallery in Houston.

The charm of Bruno's "house as sculpture" lies in what Conrads and Sperlich, in their book, *The Architecture of Fantasy,* call "the confrontation of contents and container, whereby the exterior has been ruthlessly freed of all the usual contingencies." Raoul Hausmann wrote, "Life is fantastic. Let architecture be equally fantastic." Man "has invented technological progress and pleasure," but "he has missed a great number of opportunities for imagination." (Raoul Hausmann, "An Appeal for Fantasy" in *Fantastic Architecture,* edited by Wolf Vostell and Dick Higgins, Dusseldorf: 1976.) Robert Bruno is remedying these missed opportunities by his sturdy endeavor to create an involvement between technology, the environment and sculptured architecture, brought into a unity by an imagination of powerful proportions.

Elizabeth Skidmore Sasser *is a Professor in the Architecture Department of Texas Tech University.*

The Criteria of Collecting Crafts

by Paula S. Dinneen



Above: Michael Jerry, *Cooking Pot,* copper, iron and pewter, 1975. Gift of the artist. Permanent Collection: The Metropolitan Museum of Art, New York City
Center: Mary Ann Scherr, *Bracelet with Rotating Discs,* sterling silver, 14k gold. Gift of Mr. and Mrs. Malcolm Nanes. Permanent Collection: The Metropolitan Museum of Art, New York City
Far Right: William Harper, *Brooch.* Gift of Dr. and Mrs. Stephen Mitzner. Permanent Collection: The Metropolitan Museum of Art, New York City. William Harper is represented exclusively by Kennedy Galleries, New York City

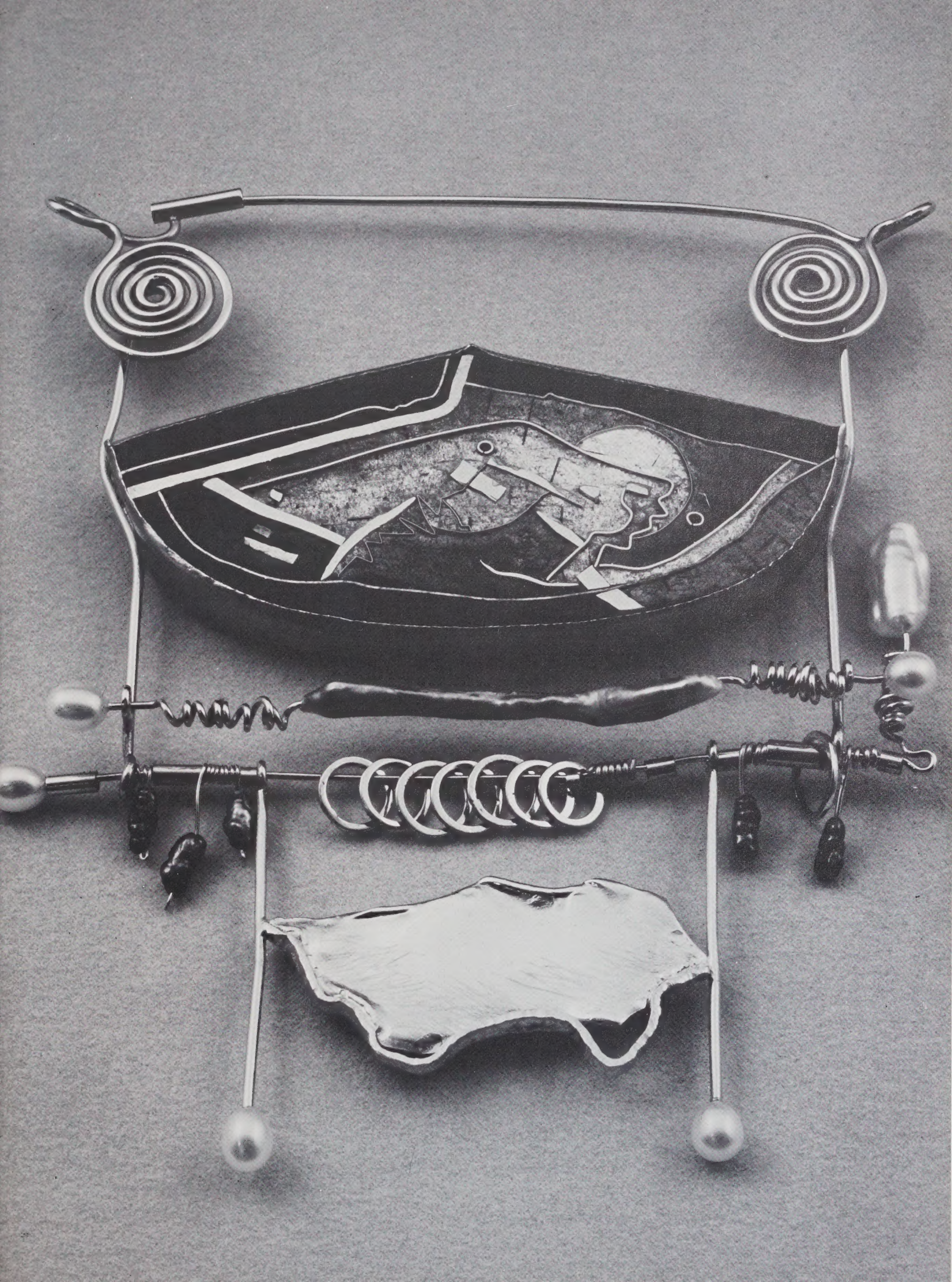
On September 24th, 1980, Boston University's Program In Artisanry hosted a panel discussion entitled "The Criteria of Collecting Crafts." The panelists included Penelope Hunter-Stiebel, assistant curator 20th-century decorative arts, Metropolitan Museum of Art, New York; Johnathan Fairbanks, curator American decorative arts, Museum of Fine Arts, Boston; and Betty Tinlot, owner Ten Arrow Gallery, Cambridge, Massachusetts. This group brought some very interesting issues into focus: how contemporary works become part of museum collections, what standards are used to evaluate works of any era and what criteria individuals might look for when collecting crafts.

Before embarking on such a vast topic, I think language is interesting to consider. Stopping for a moment to think over the notion of "collecting," I am struck with how much nostalgia is attached to its definition. Immediately an image comes to mind of the little boxes of treasures that all of us accumulated as children. These treasures could create for us a world of fantasy and dream. For adults, the practice doesn't really change much, although many of us would prefer to deny our need to accumulate. But how often have you tucked away a theater stub, pressed a flower between a page or made a purchase because it represented a moment you wanted to preserve. In this sense we are all collectors.

Collections are also interesting. They are motivated by many different attitudes, fiscal and social status being the most popular. The universal passion to make a personal statement also exists, and through personal quest and commitment some of the great public collections are available today. Many of the more well known collectors, Frick, Mellon, Morgan, had buyers who assured the wisest purchases. The hand-picked, eccentric collections today provide us a stimulating look at the collector as well as the work collected. Collections provide perspective on an era and are reference points to the attitudes of the day. In the final analysis, the impulse of the collector makes the object collectable.

In any discussion of collecting we must define terms, for instance, what exactly do we mean by craft? The concept of art or craft is most difficult, because by its very nature it is constantly being defined and redefined. What is considered art or craft in one era by one culture may not be by another. If we are collecting stamps or coins, we know what we are looking for by definition—choice then becomes a matter of authenticity and rarity.

We must not overlook the balance between the genius of the artisan and the society which recognizes him. It is society and the life of the times which in a broad sense creates the artist. What our society chooses to collect today can only be directly linked to today's values. Throughout history, man's creative expressions have been valued differently. The 8th-century B.C. Greek vase, which we value today for its form and intricate geometric design, we learn was designed to hold libations, which would pass through holes in its base to the deceased below. Its function was purely commerative. With the emergence of the Renaissance, the artist's role in society changed. Hereto, Plato's definition of the liberal arts



The Metropolitan Museum's collection houses masterpieces of every age, which are now the contemporary craftsman's competition.

Above: Bonnin & Morris, factory, Philadelphia, Fruit Basket, soft-paste porcelain, glazed, 6"d., ca. 1770-1772. Frederick Brown Fund. Courtesy, Museum of Fine Arts, Boston
Center: Tiffany and Co., New York, *Vase,* silver with borders of copper and silver inlay inside, gilded, 1876. Gift of Gideon F.T. Read. Courtesy, Museum of Fine Arts, Boston
Far Right: John Cogswell, Boston, *Chest on Chest,* mahogany, 97"h., ca. 1782. William Francis Warden Fund. Courtesy, Museum of Fine Arts, Boston

had excluded applied art because it lacked theoretical basis. The Renaissance looked to the total embodiment of mankind, and the artist was acknowledged as a man of ideas whose works were viewed as a record of the creative mind. The modern movement, starting with the industrial revolution, created the split between artist and craftsman.

Penelope Hunter-Stiebel began by telling us that, at the Metropolitan there are no specific allocations of funds for 20th-century decorative arts. We learned that in 1922 a major private donation was made to the museum for the purpose of collecting decorative arts. The curator, believing that what was being done in that day warranted recognition, proceeded to purchase "the very cream of the crop." That group of work became the Metropolitan's Art Deco collection. Stiebel, defining herself as a "beggar by profession," was quick to explain that she is both a beggar and a chooser. What is accepted by the museum as a donation must measure up in every way to its high standards. The museum chooses not to be a picture gallery, merely recording what is in vogue, but rather, considers itself an encyclopedic recording of the esthetic high points of history.

The collections at the Metropolitan range from primative to contemporary and include many cultures: Islamic, Middle Eastern, European and American. The collection houses masterpieces of every age, which are now the contemporary craftman's competition. "The comparisons are going to be inevitable, the esthetic competition the toughest," Hunter-Stiebel noted. A museum does not merely look for established names, we were told.

The Metropolitan has made its largest number of craft acquisitions in the area of contemporary glass. "The best of contemporary glass measures up and even surpasses the best works in any point in that medium." As to contemporary metalwork, Hunter-Stiebel described the collecting process as being more difficult, not because she feels there is any lack of high-quality work, but rather because a strong craft gallery focus in this area does not exist in New York City. Most of the work which has ended up in the museum collection has come through a gallery where the curator-collector relationship is established. Once the work has been found, the process has hardly ended. Although the work is donated, it still must go through the rigorous channels of approval—the Department Head, the Director and finally the Board of Trustees. At any point the curator's recommendation may be challenged "so I must have no doubts that the work must absolutely measure up." Responding to a question as to what curators do to make themselves accessible to the craftman's work, Hunter-Stiebel replied, "I try to see as much as any one person can, however the craftsmen should not feel reluctant to send slides or catalogs and make themselves known to the museum curators."

Johnathan Fairbanks reminisced about connoisseurship, those qualites which makes us competent to act as a judge of a work of art and which are used in choosing any work of art of any age. The Boston Museum of Fine Arts has not acquired as many or as varied pieces of contemporary craft as the Metropolitan. Last year, however, through a matching grant with the National Endowment for the Arts, the Museum of Fine Arts acquired the work of four contemporary woodworkers. This acquisition should in no way be underestimated. Public money was paid for the work specifically for the enjoyment and use by the public.

Fairbanks cited Johnathan Richardson's *The Science and Principle of Connoisseurship* of 1719, which today still provides a tangible reference base. He referred specifically to Richardson's 14 factors which can be taken as gospel for the collector. However, he pointed out that certain points have become more or less important with time.

Overall appearance, relationship of detail, form and color are all important, but overall appearance, Fairbanks noted is the most important. "Overall appearance is the stance of a piece, how it looks at first." Using John Cogwell's chest of 1782 as an example, Fairbanks described a work of outstanding form, "it has fine proportion of its individual constituant parts—none of them are overwhelming. . . . It is beautiful and blends well."

The technique employed by the craftsman and trade practice of the time are also important considerations. We were reminded by Fairbanks that originality in the 17th and 18th centuries was not inportant to the artisan. Much was learned through imitation.

"The American craft movement is unique and is an important art movement. The past decade has brought us work far more interesting than the so-called fine arts."

Analysis of material is also a criteria. Referring us to an 18th-century porcelain basket, Fairbanks pointed out that its collectability was established because of circumstance. In 1772, a factory in Philadelphia was set up in response to the nonimportation agreements which were established with England. It set out to copy work being produced in England. The business venture failed and today only some 12 or so pieces remain intact. Through scientific analysis, it was determined that the components of the porcelain matched that advertised by the Philadelphia factory. The basket was an original copy of an English piece.

Function, practice and custom are important aspects of connoisseurship, as is an understanding of style of the period. Fairbanks presented a bowl made in 1718, important to us today because it is a "landmark" of the early Queen Anne style. This bowl (not shown here) was in the quiet, spare style in American decorative arts that forecast what would later be evident in woodwork. It provided startling contrast to the Baroque works done at the turn of the century.

Date, attribution, history and condition of an object are important along with its evaluation in the marketplace. The appraisal of an object, however, remains outside the realm of the museum curator. Marketplace conditions, popularity of style, rarity of a work, intrinsic and extrinsic value and exhibition record all determine value.

Finally, Fairbanks noted that the Museum of Fine Arts' only funding source for the collection of American decorative arts is through National Endowment for the Arts' grants or gifts from trustee members.

Betty Tinlot spoke to us from a merchandising point of view. She stressed how an individual can choose craft for his own use or personal collection. Speaking as a shopkeeper, Tinlot noted, "we buy what we think we can sell; we have to be aware of the marketplace." She learns about techniques, considers the price and buys what she likes the look of. "Crafts should be held or touched and evaluated for their use. Design and function should be compatable. The chair above all should be comfortable."

According to Tinlot, crafts today can be divided into three areas, and the buyer should be aware when making a purchase of what he is getting. These areas are: first, the production craftsman. This work is not one-of-a-kind. "Be certain to compare handmade work with the finest manufactured work. If the work is priced competitively," said Tinlot, "the buyer gets so much more from the handmade piece." The designer/craftsman is the second area; this work represents the middle-price range. These one-of-a-kind pieces will be future antiques. "This is an exciting area for the adventurous buyer." Tinlot defined the third area as the artist/craftman. These are a select few whose work has been established and is in public and private collections. The prices here reflect a serious investment for the collector.

Look, compare, ask questions and above all buy only what you like, Tinlot advised. "The American craft movement is unique and is an important art movement. The past decade has brought us work far more interesting than the so-called fine arts."

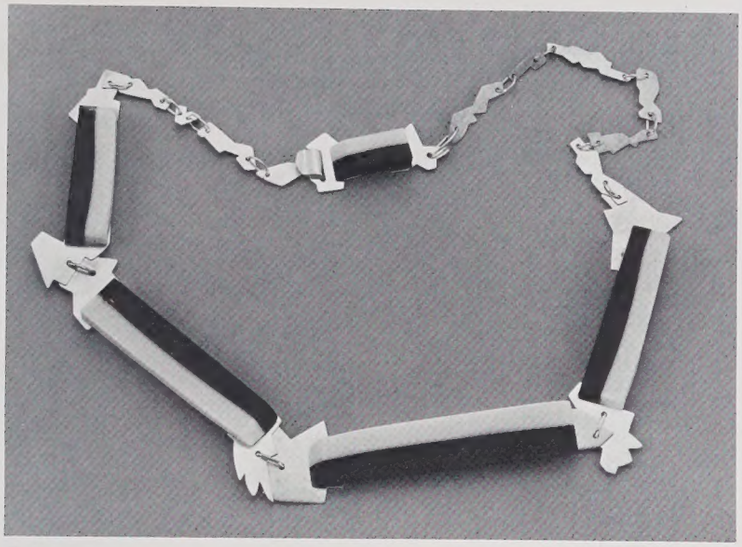
Certainly, there is little doubt that the movement we refer to today as contemporary crafts has moved rapidly in the past 10 years and has grown and developed many fold. We, the makers, must recognize that until the marketplace defines itself, the collecting of craft will be many paces behind the sound, proven investment potential of painting or sculpture. Only recently have the auction houses recognized contemporary American decorative arts. The buying of art by the public, on the other hand, is big business.

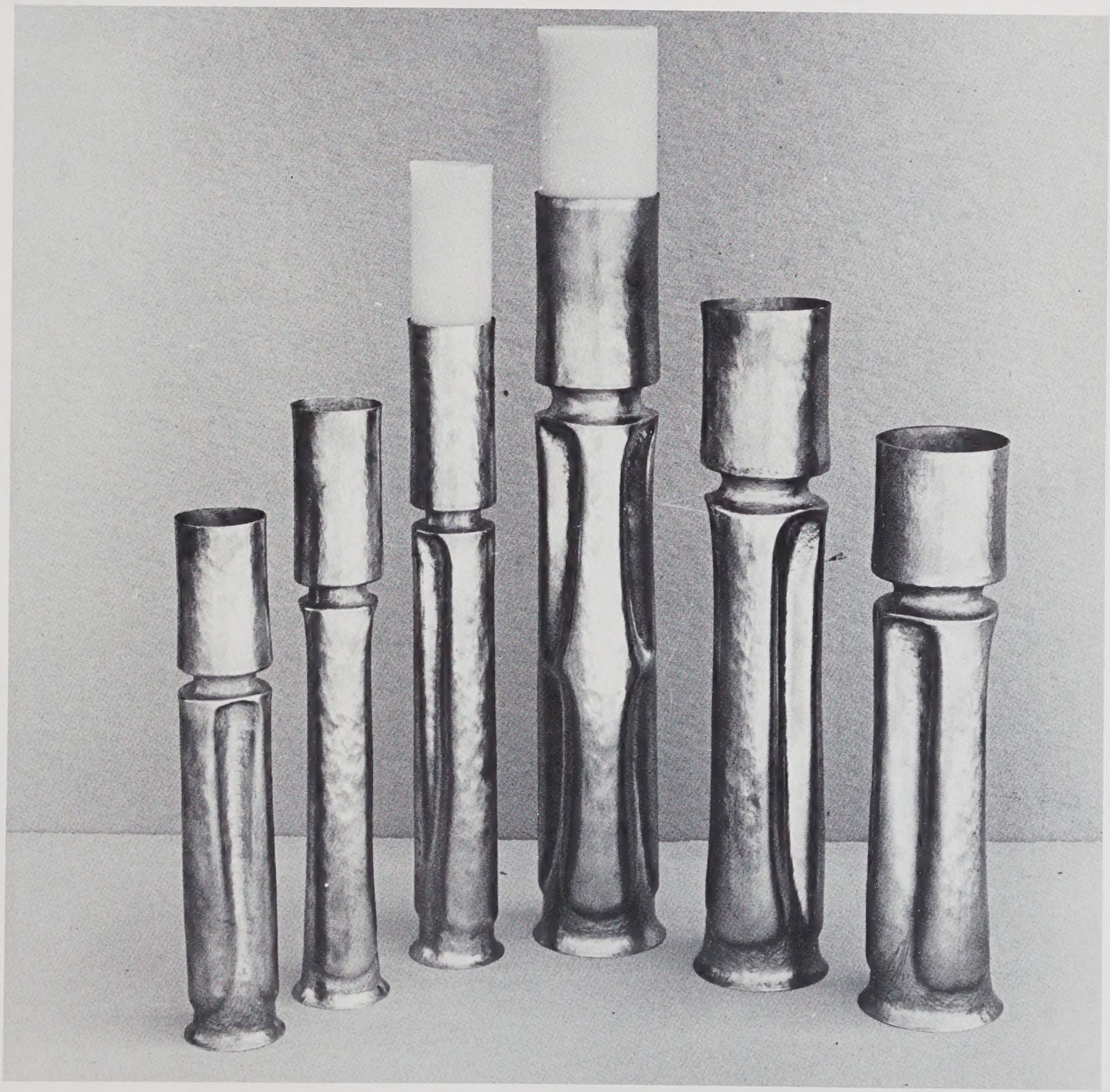
The challenge to our public institutions and curators is to educate and teach the public to recognize value in those crafts our society is producing. It must be their task to develop sources of funding so that the work can continue to be acquired. The very act of putting the best of today's work in museums does and will continue to give a foothold to crafts in today's art market. The challenge to the gallery must be to expose the craftsman to the marketplace and deliver the highest quality by taking bold steps when they are required. The challenge to craftmen must be to produce what is our best, and continue to stand up for what we as a movement believe we need. This is a chain with many links and no part of it can be underestimated or overlooked.

Example of one-of-a-kind craft: Linda MacNeil, *Necklace,* 14k yellow gold with cream and maroon vitrolite glass. Photo: courtesy Ten Arrow Gallery, Cambridge, Massachusetts

Example of exceptional craftwork: Jon Brooks, *Manta Ray Chair,* walnut, 42x47x29". Photo: courtesy Ten Arrow Gallery, Cambridge, Massachusetts

Example of production craft: Tom Markusen, *Candleholders,* available in copper and silver plate in 2"d.x12, 14 or 16"h., 3"d.x16, 19 or 22"h. and 4"d.x36"h. Photo: courtesy Ten Arrow Gallery, Cambridge, Massachusetts
Photo: courtesy American Craft Council, New York

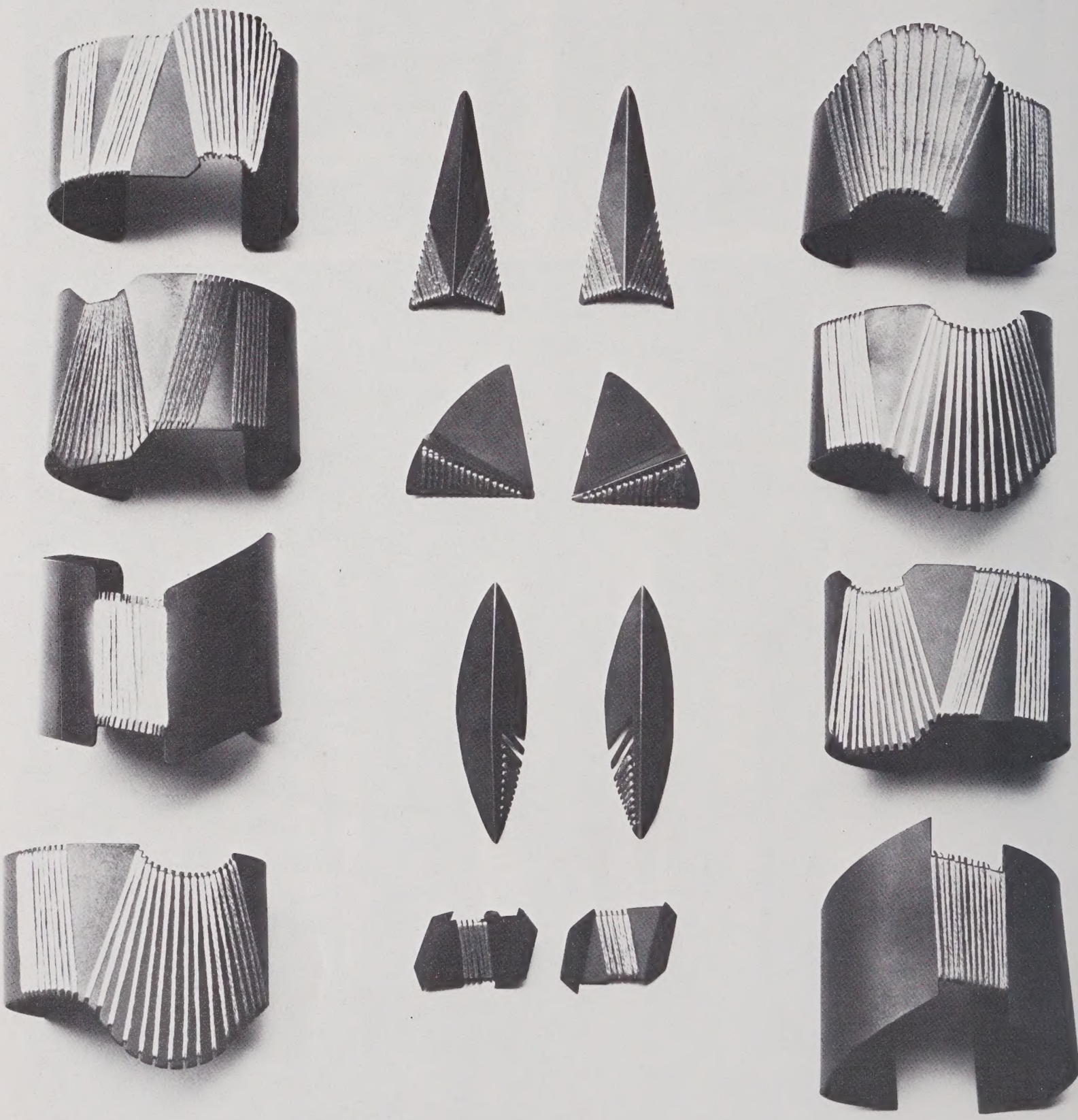




The Business of Jewelry: Ivy Ross

First in a Series

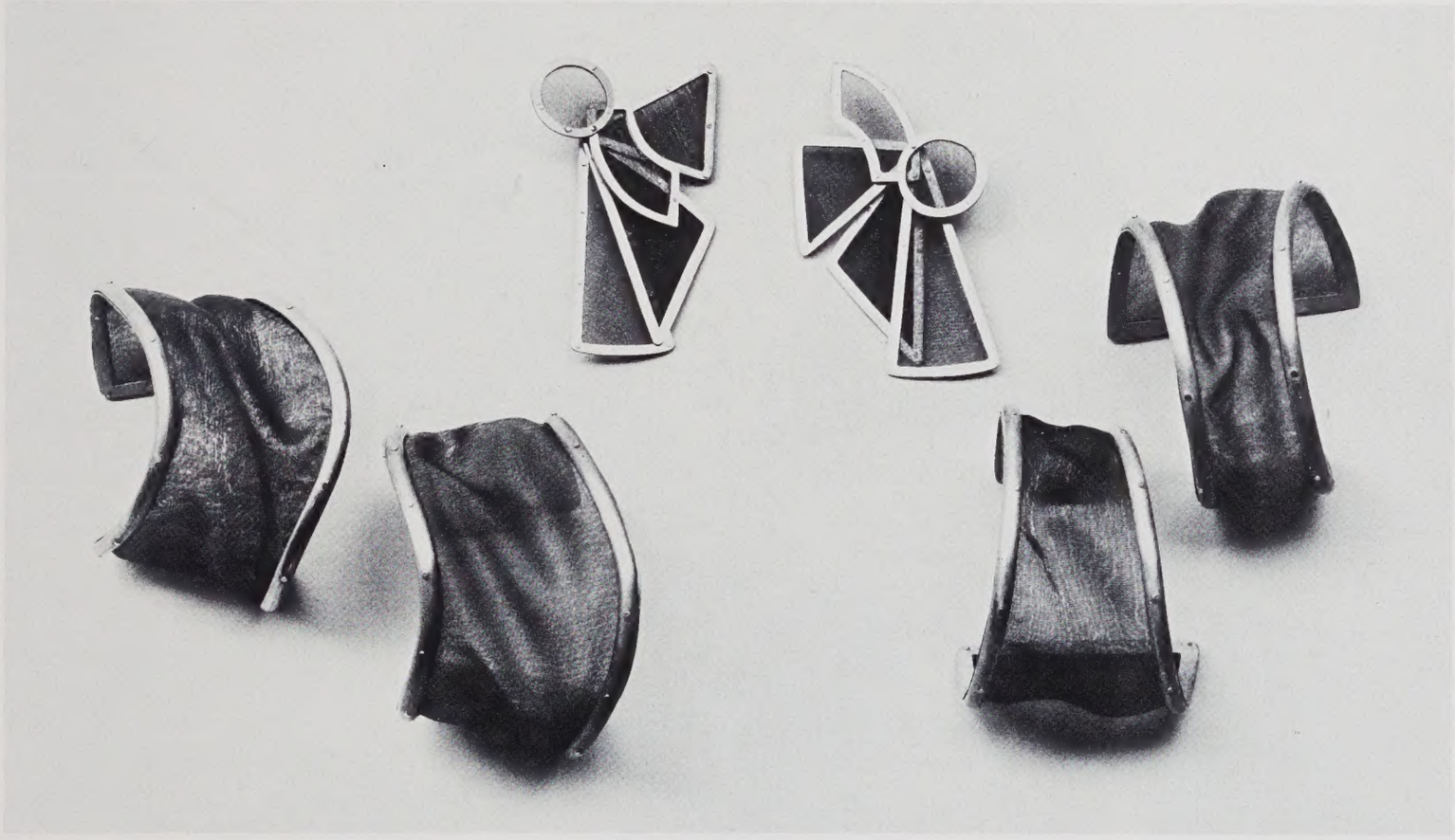
by Robert Cardinale



Above: Ivy Ross, matte black oxidized brass cufflinks, bracelets and earrings with multicolored silk threads
Right: Bracelets from Ivy Ross's production line—iridescent "luminère" nylon fabric folded and riveted between half-round sterling frames. The earrings are individual panels of the same fabric in different colors; the panels are removable for rearranging.

Contemporary jewelry and metalsmithing offer a variety of career options to metalsmiths for making not only a viable living but artistic statements as well. This article and those to follow will reveal the nature of these options, especially those outside of academic institutions. Here I'll discuss the beginnings, the life style and the demands of a metalsmith working in the fashion industry.

Ivy Ross, designer, metalsmith and owner of Small Wonders, a young New York company which produces and markets fine art jewelry as fashion accessories.



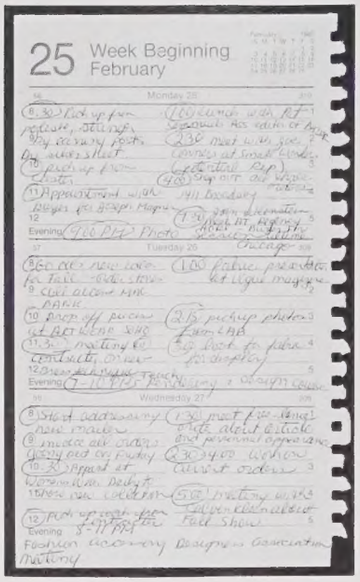
The selection of Ivy Ross for this article was motivated by her presentation at the 6th Rocky Mountain Metalsmithing Symposium at Vail, Colarado in July, 1980. I was struck by the energy and talent of this young woman, who is carving out a name for herself in New York's difficult and complex world of what she calls "better" fashion jewelry. Her commitment to fine design and her dedication to making "fine art" jewelry accessible to large numbers of discerning people were impressive.

Ross studied metalsmithing at Syracuse University and later attended the Fashion Institute of Technology in New York City. This combined program gave her an academic approach to metal capped by the excitement and energy of the fashion world.

Her early training also helped shape her design sense. Ross's father worked with Raymond Loewy—designer of the classic Studebaker car, and she was constantly taken to car shows and industrial design exhibits. This exposure led to her own later infatuation with the Bauhaus style. All these influences have left their mark on her strong, clean-line designs, which, although grounded in early 20th-century design concepts, are functional and fresh today.

Ross started free-lance designing for the well-established firm of Trifari, Kraussman and Fishal of New York while still a student at the Fashion Institute of Technology. Working with a knowledgeable marketing person there gave her insight into the nuances of the jewelry market of middle America. She began to take note of the advertisements of jewelry companies and stores with whom she felt an affinity. These firms would later become her clients when her own company became a reality. Ross advises young metalsmiths searching for outlets for their work to familiarize themselves with a company's style, then to take their own ideas and knowledge of metalworking and apply them to compatible designs.

Several opportunities furthered Ross's career—a chance meeting with the owners of Penny Preville Designs of New York gave her another job and two years worth of practical experience in designing, producing and marketing fashion accessories. While still with Penny Preville Designs, she collaborated with former classmate Lorraine Rosenbaum on a line of fine belt buckles to enter in the Rhinebeck craft fair. The pieces were rejected from Rhinebeck, but as chance would have it, a buyer from Bergdorf Goodman



(New York) saw Ross and Rosenbaum wearing the buckles and discovered that they had manufactured them. She took them into her office, asked the name of their company, which they named Small Wonders on the spot, and called the editor of *Women's Wear Daily* to tell her of this exciting "new" company. *WWD* did a story on them and they were off and running. Ross reflects that she wasn't sure whether or not she wanted all this responsibility so quickly but didn't feel that she could stop such a marvelous momentum. This was early in 1978, and the business developed very quickly. "Before we knew it, we had $30,000 in orders from major stores." However, in order to produce such a volume of orders approximately $15,000 in cash was needed. Even the First Women's Bank would not loan them the money. "No banks will lend a business money until they can show financial statements for one year—Catch 22—you can't do business without money; you can't get money until you do business." They proceeded by borrowing small amounts of money from friends and relatives and were able to meet their orders. Ross notes that the major stores have cancellation dates on their orders, and if the merchandise is not postmarked by the set date, the packages are returned unopened and of course without payment.

Work is beginning to pay off, as, after three years, Small Wonders is a solidly established business with considerable assets. Ross's own personal income is not great but respectable (net approximately $18,000 to $20,000 per year) and the rewards, both personal and financial, promise to be greater. The work is represented in nearly 50 major stores in the United States, including Neiman Marcus, Bonwit Teller and I. Magnin. *Vogue* and *Harper's Bazaar* have featured Ross's one-of-a-kind work as well as the productions of Small Wonders.

The pace and demands of Ross's involvement with Small Wonders are all encompassing. Recently her partner, Rosenbaum, left the business because the lifestyle wasn't for her. Ross notes that her whole life revolves around the business and the making of one-of-a-kind pieces for exhibitions and galleries.

Being familiar with the pace of the university, I had no conception of the complexity of developing and running a small but high-powered business. I asked Ivy to discuss in detail the daily duties and schedule that she maintains. Her days are very hectic and might involve an early morning meeting with a buyer from California, then on to her rounds of the contractors who are doing plating, cutting, polishing and other jobs for her. She checks the quality of the work, picks up and drops off the pieces for the next contractor. Then she may dash back to her apartment/studio/showroom to meet a photographer who is using some of her pieces in a publicity piece. Next she might have to package and ship off an order to meet a deadline or rush to meet a class that she's teaching. (In the Spring of 1979, Ross taught a course on the design of jewelry and its practical application at SUNY in New Paltz, New York. She has also done workshops at Boston University, Memphis Academy of Art and Washington University in St. Louis, among others. She continues to travel and do workshops with young metalsmithing students, as she wants to share her belief in sound design and her commitment to introducing fine art jewelry to discerning consumers.)

In this whirlwind of energy and activity Ross maintains her artistic integrity as a metalsmith. She continues to do one-of-a-kind work. "Ideas come along that excite me and I don't want to *not* do them just because they won't fit into the production model." Ross strongly believes that both facets of her work support each other: the production ideas often stimulate exhibition work and sometimes in preparing for an exhibition, ideas for a line evolve.

Fashion industry demands change, often in diametrically opposed directions. The industry moves to stimulate sales by focusing on a new set of colors, shapes and silhouettes each season. Ross and other designers meet with buyers to get information on new directions and then develop a line or collection—usually two per year—fall/winter and spring/summer—along certain guidelines. Ivy sees this as challenging input rather than restrictive pressure. Since her focus is on strong design, her collections are not as ephemeral as they might seem. The seasonal debuts are merely the opportunity to introduce a design concept. It may be popular in New York that year, only to be picked up and sold in Texas, California or Iowa two or three years later.

Ross's latest line for Small Wonders are pieces incorporating rich and vibrant silk thread, strongly contrasted with anodized matt-black brass. The pieces reflect Ross's admiration for Bauhaus design and bring to mind the linear constructions of Naum Gabo.

In her own work, Ross is currently experimenting with titanium and tantalum because of these metals' ability to permanently hold a rich range of color through heat oxidation and anodizing. While the titanium doesn't lend itself to production, the tantalum can be scored and bent so that it is flexible and the variety of forms is much greater.

Ross makes all of her own prototypes, sometimes two or three sets of pieces, as she now has two people representing her work across the country.

The life style and business of Ivy Ross is certainly not the direction for all young metalsmiths around the country. However, it may be a sound alternative for some, as Ross notes that maybe five out of 20 of her students at New Paltz have the ability and the energy to develop and produce designs that, with the proper development, could be marketable. The pace of better fashion jewelry is indeed a strenuous one, and a very different one from that to which most students are exposed in good metals programs around the country. However, it is an option which merits serious consideration and which affords a metalsmith the opportunity to maintain esthetic integrity and still make a good living.

Robert Cardinale is an associate professor of Art at the University of Arizona in Tucson, a metalsmith and craft critic.

Left: All-tantlum earrings with folded wings from Small Wonders. Also, bent triangle and ribbon pins—all in shades of purple and blue; the oxide layer has been cut through to expose a line of another color. Above left: Part of the Fall 1980 collection of Small Wonders showing bracelets, earrings and pendant in matte-finish pewter and fumed, iridescent "peacock feather" pattern glass. The wholesale price of the pieces is from $6 to $14. Above right: A page from Ross's daily appointment book indicating the pace of the life of a metalsmith fully involved in a fine art/fashion jewelry business.

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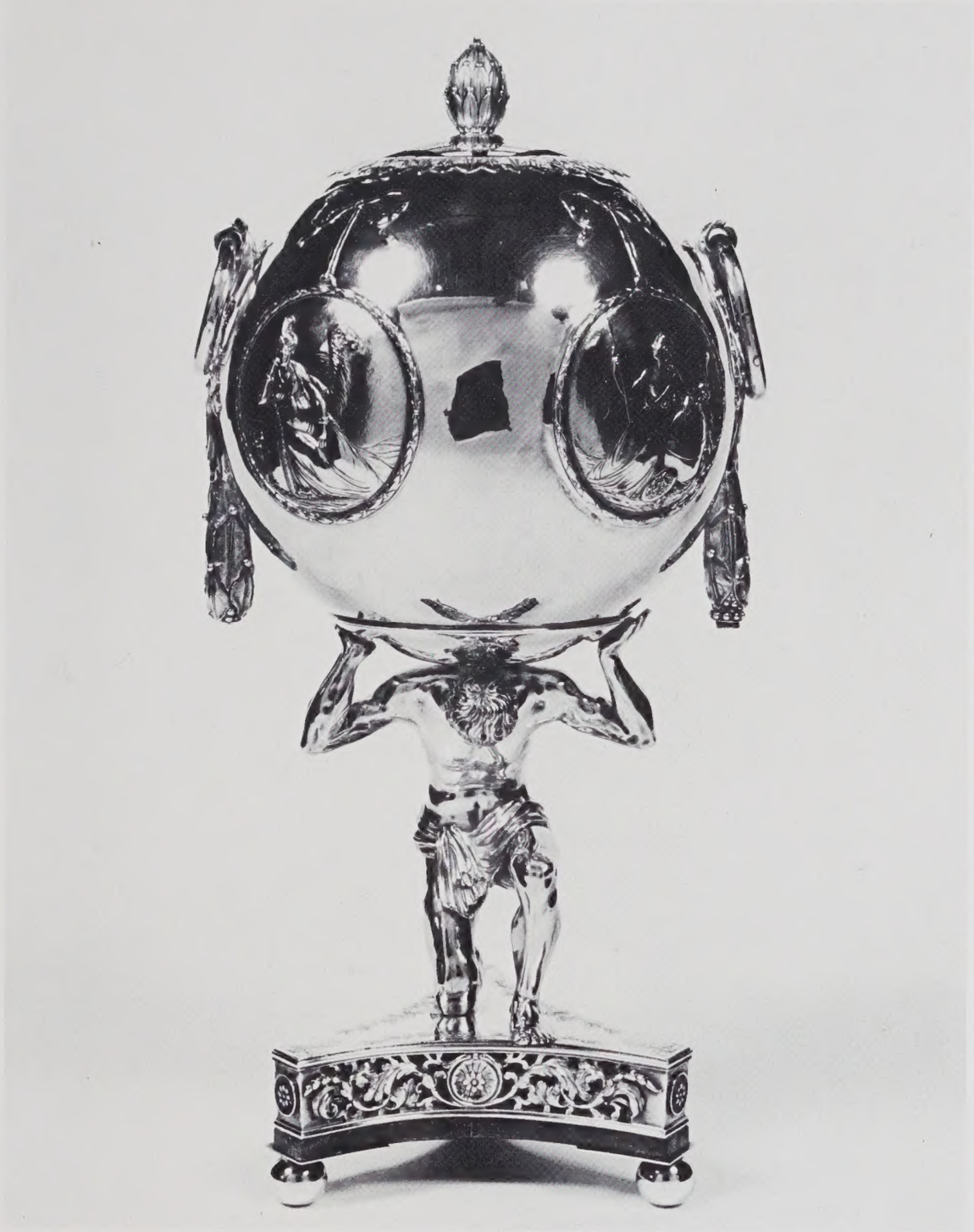
Silversmiths in 18th-century London served a widely varied audience and designed an astonishing variety of domestic objects ranging from simple flatware to elaborate virtuoso pieces for display. Due to the fact that the guild of goldsmiths in England required that all craftsmen enter their personal marks at Goldsmiths' Hall, we know the names and many biographical details of hundreds of silversmiths—both men and women—whose designs were to influence countless generations of artists in the field. Among the work which has survived are many unusual pieces that would qualify as "masterpieces," in which complete integration of form, function and fabrication has occurred in a design that is esthetically pleasing and visually exciting.

An extraordinary hot water urn by the London silversmith Thomas Heming combines the best of the sculptural tradition with innovative functional design. Made in 1777–1778, the urn is composed of a large spherical container to hold water. On the surface of this globe are inserted *repoussé* roundels that depict the four known continents of the world—Africa, Asia, Europe and America. Each continent is represented by an allegorical female figure, swathed in flowing draperies and surrounded by attributes of their specific geographic regions; Asia, for example, is accompanied by a camel. A pair of ring handles at both sides of the globe are attached above cast and delicately chased garlands composed of leaves and berries. The hot water globe is supported on the shoulders of semi-nude muscular figure of Atlas, his head bowed with the implied weight of the terrestrial sphere. The figure is modelled, cast and chased with a sculptural finesse rarely equalled in domestic silver of the period. The figure kneels upon a curved triangular base supported by three ball feet, and the base is applied with pierced arabesque foliage



panels. From the raising of the spherical globe, to the casting of the figure and the chasing of delicate details on all portions of the urn, this work fulfills the technical requirements of a masterwork of silver design and fabrication.

The imposing sculptural form of the object is enhanced by Heming's incorporation of a brilliant functional system that makes the object useful as well as beautiful. The globe may be detached from the supporting stem to allow a red-hot iron rod to be inserted under it to keep the water hot while in use. Beneath one of the ring handles is located a small medallion; when swung to the side this medallion reveals a keyhole. The key that is inserted controls the spigot opening, and when turned causes hot water to rise through concealed inner tubes and pour from the hollow foliage garland on the right side of the urn.

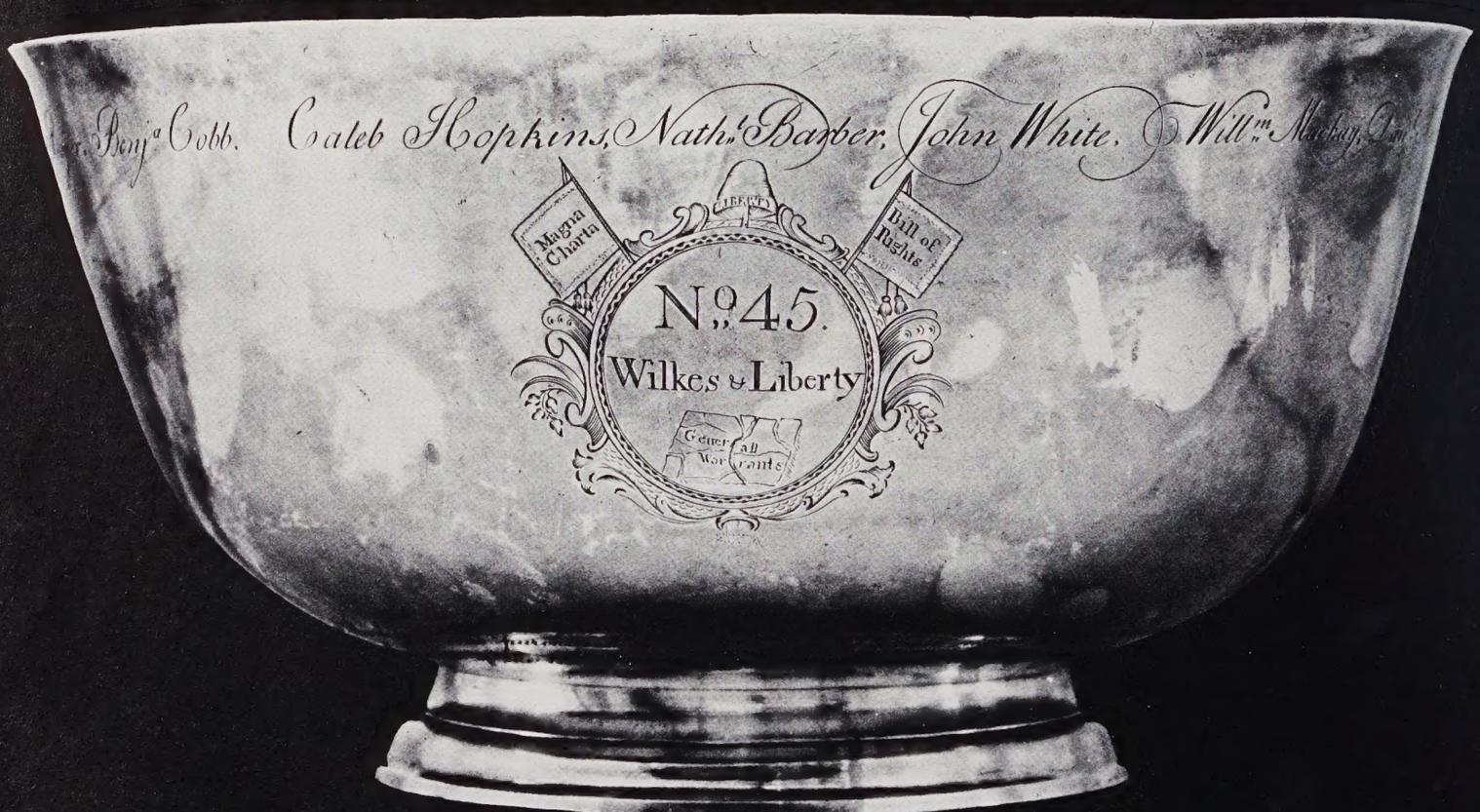
Such ingenuity of design is typical of the best of 18th-century silver, but Heming's design is certainly of the first order. Heming's inherent talents as a designer of silver were nurtured by his study with the Huguenot silversmith Peter Archambo. Heming completed his apprenticeship with Archambo by 1746 and was "freed" by the Worshipful Company of Goldsmiths that same year. Heming's notable successes in London attracted the attention of many wealthy clients, including the Royalty, and in 1760 he was appointed Royal Goldsmith to King George III. Works produced in the Heming studio were not only enjoyed in London, but were even commissioned by churches in the American colonies.

If a masterpiece may be defined as an object that proudly displays technical competence, innovation and visual sensitivity, this urn by Thomas Heming admirably fulfills these requirements.

David Revere McFadden *Curator of Decorative Arts, Cooper-Hewitt Museum*

A METALSMITH'S GUIDE TO BOSTON

by
Vincent Ferrini



One cannot adequately write about contemporary metalsmithing in Boston while ignoring all that came before, because Boston is synonymous with American tradition, a fact which this writer feels continues to affect its populace, artists and patrons. Why would a metalsmith want to visit Boston in the first place? Probably to feast his eyes on rich museum collections of metal and other arts and to steep himself in those vestiges of early America which still abound. There are, of course, contemporary metalsmiths of all persuasions working here, excellent schools and departments offering the latest techniques and training and an increasingly aware buying public. But, first, some details about Boston's development.

Old Boston

Most tourists come to Boston to sample the flavor of the way it all was. They walk the picturesque streets of Beacon Hill, marvel at the golden dome of the State House, which used to dominate the quaint skyline of the "hill" as viewed from the Cambridge side of the Charles River. There is still a great deal of charming "olde" Boston remaining, but the skyline, with its soaring shafts of glass, steel and anodized aluminum amidst the predominantly red-brick schema, is no longer provincial. Fortunately, for many good reasons, Bostonians have taken a shrewd Yankee's eye view of their assets and have taken firm measures to insure the preservation and excellent refurbishment of many old buildings, have planted flowers and erected sculpture and fountains, and the old town hasn't looked so good in a long time. By the time this article is printed, Boston will be winding down its year-long 350th Birthday Party. Yes, there were coopers and smiths at work on Boston Common this summer. Alongside grazing cows, they actually recreated the Fairbanks House of Dedham with hand-hewn beams, hand-forged tools and all.

Interestingly, however, despite the seemingly long time since its founding in 1630 (the Pilgrims founded Plymouth in 1620), Boston only started to come into its own as a major city in about 1798. Its architecture alone will tell you that its major growth came about in the Federalist period and after. One can ponder in amazement the tremendous energy from successful commerce and the new-found freedom of independence which focused itself in Boston. This formerly tiny fishing village, perched atop a hill surrounded by salt marsh, was suddenly transformed. Marshes were filled with rubble and clamshells, and row upon row of attached red-brick houses were built (I know because I owned such a house in the new re-emerging South End), and the shipyards expanded to meet the potential of Boston's natural harbor. Trade links were established throughout the world, bringing multicultural influences and immigrants. Educational institutions were established (Harvard University first) and the arts flourished. It was into the early phase of this period of excitement and ferment that perhaps the best known Boston silversmith, Paul Revere, II was born, in 1735, and, as we know, he lived to influence the shaping of his time and possibly our own.

For native Bostonians, the temptation is great to "pooh, pooh" Revere and his exploits because we have suffered from over-exposure and the rank commercialization of his role as super-patriot. We wince in genuine pain at the ubiquitous "Sons of Liberty" bowl available in 10 different sizes, in plate and plastic in "gifte shoppes" throughout Massachusetts. The genuine article, on permanent display in the Revere Gallery at the Museum of Fine Arts, is of impressive size and quality. The bowl bears a finely engraved legend (Revere was a master engraver) dealing with its role in celebrating this country's independence from England. However, this former colony was only politically independent form England; the design of its silver was very English for many years thereafter.

With all due respect to a number of excellent early American silversmiths who predate Revere II, our super-patriot was indeed a remarkable man. Having learned his profession from his father, Paul Revere I, he had a head start over young smiths, who, in the European tradition, often had to suffer several years of slavelike apprenticeship to a master craftsman. Revere had an insatiably curious mind and instinctive knack for successful business ventures (good thing too, since his first and second wives each bore him eight children). He was a master engraver of printer's plates for book illustrations and newspaper mastheads; he made fine gold jewelry, all kinds of plate (sterling), from the simplest shoebuckle to elegantly wrought teapots. He conducted a hardware business, did repairs, made picture frames and, in later years, developed a thriving business smelting copper and rolling it into sheet for architectural purposes, the most outstanding example being the Bullfinch designed State House on Beacon Hill, its gleaming dome sheathed in Revere copper and heavily gold-leafed. Revere also found time to do some dentistry, as was customary for other metalsmiths of that era. Then, of course, at age 41, he performed the feat for which he is most famous to school children nationwide—a dash on horseback from Boston to Lexington and Concord to warn of the approaching British fleet.

Of considerable interest to metalsmiths would be a visit to Revere's house, a tiny wood and brick sort of tudor-colonial dwelling, tucked among a jumble of taller houses and commercial buildings in Boston's North End, currently a vibrantly Italian neighborhood. Once you have inspected the house and its interesting collection of furniture and tools (cast and wrought iron kitchen implements and the like), take a walk along Hanover and adjacent streets to browse through hardware stores featuring fascinating imported Italian cookware and household gadgets (most metals represented). Sample wonderful local food, from crisp, fried calamari to creamy canolli.

Incidentally, the best way for a newcomer to navigate Boston is to book a tour of the Freedom Trail for seeing important churches, burial grounds and so on in downtown Boston and then on to the Naval Shipyard over in Charlestown for a tour of the USS Constitution, Bunker Hill and other historical sites. The ships' cannons, brass fittings and other hardware, all beautifully restored and maintained, will be appreciated by any metalsmith.

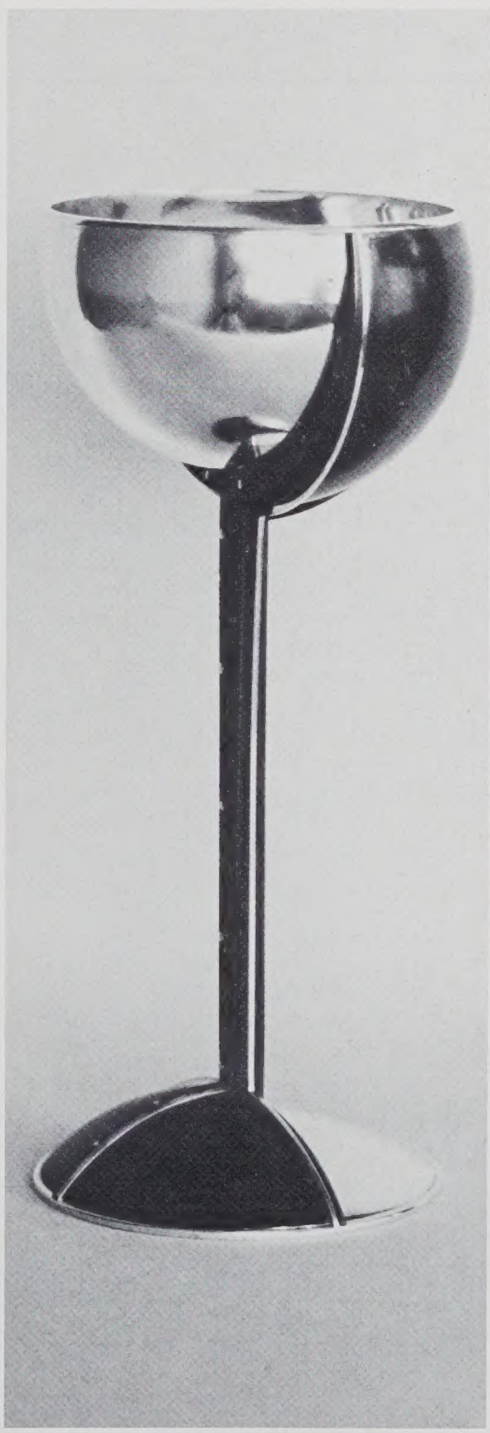
Museums of Fine Arts

After experiencing some of the history of the city, you might spend an entire day at the Museum of Fine Arts, which would merely serve to whet your appetite for viewing more of its fabulous treasures. The American Decorative Arts Department, under the thoughtful (and very helpful) curatorial guidance of Jonathan Fairbanks, Jr., has a constant, rotating showing of a great portion of its extensive collection of American silver, from the earliest works of English-born Robert Sanderson, who lived and worked in Boston (1609-1693) to the elegant neoclassical work of Charles Louis Boehme, a prominent craftsman of Philadelphia (1774-1868). Don't miss the anonymous pieces, either, such as the 18th-century tea kettle, with its marvelous spout and handle.

Tucked away among its glamorous silver neighbors is an 18th-century strong-willed cast-iron water kettle. Note the wire handle for hanging it on the fireplace crane and its curled handle for pouring. Smaller utilitarian pieces, such

This is a continuing series of metalsmith's guides to cities, regions and museums throughout the world. The purpose of these guides is to give those interested in viewing metalwork during their travels an introduction to the treasures and resources, both accessible and hidden, of a certain place. The tours also document history and tradition in the field of metalwork.

Metalsmith *magazine encourages submissions of ideas for these guides. The tours should focus on a single location and be illustrated with maps, line drawings and photographs whenever possible. Metalwork can be found all around us in both urban and rural environments. No place is too remote to mention—an exquisite bronze bust in a hotel lobby, a certain iron grill in New Orleans, knives in a fishing tackle store. Here is a chance to share your favorite places and works with others. Send submissions to: Sarah Bodine, Managing Editor, Metalsmith, 35 West 84th Street, New York, NY 10024.*



Thomas McClelland, *Goblet,* sterling, copper, steel, gold. Boston University Program in Artisanry
Left: Paul Revere II, *Sons of Liberty Bowl,* silver, 5½"h.x5-13/16"d., 1768. Gift by Subscription and Francis Bartlett Fund. Courtesy, Museum of Fine Arts, Boston

as spoons, baby rattles and all sorts of mourning rings and brooches comprise a small but interesting portion of the collection.

If cast iron is your passion, then you must schedule a side-trip 10 miles north of Boston to the town of Saugus. There, on Central Street, is the Saugus Iron Works National Historic Site. In its recreated and restored buildings you can watch continuous demonstrations of iron forging and spend hours in its museum viewing a huge exhibit of iron ware from the 1640s through the 19th century. It may seem hard to comprehend for some, but a great deal of iron-ore mining, smelting, casting and forging took place just north of Boston, its necessary fuel—charcoal—derived from local forests.

For further research into the traditional crafts in New England, the best source would be the many local historic societies. There is usually a house or houses restored to near former condition and filled with fascinating artifacts and art, the orientation of each collection recording the purpose and function of its community, from seafaring Salem and Scituate to revolutionary Lexington and Concord.

The history of the area is further recorded in the two weighty volumes on the Museum of Fine Arts Silver collection, meticulously annotated and photographed. These volumes, entitled *American Silver, 1655-1825 in the Museum of Fine Arts, Boston* by Kathryn C. Buhler are available through the museum's bookstore and are well worth the price of $45.00 for the set, hardbound, and $20.00 per set, paperback. Mrs. Buhler's invaluable record, with her no-nonsense format and occasional dry editorial comment, is a joy to read. The addenda section of volume II only begins to record the Museum's on-going acquisition policy.

Getting back to the tour of the Museum of Fine Arts, I recommend taking a sketch pad and/or a nonflash camera when visiting one of the Western World's most complete collections of Egyptian art and architecture. The bronze artifacts and gold jewelry are a marvel of technical accomplishment and of extraordinary design sophistication. Outstanding also is MFA's collection of Oriental art. Among the breath-taking kimonos, carved jade, exquisite ceramics from every period, brooding Buddahs and delicate screens and scrolls, one finds exciting examples of metal arts brought to astounding heights of technical proficiency and esthetic refinement, centuries before people in the West were capable of even the crudest metal forming. There are bronzes of all descriptions, sculptural and functional, and a significant number of Japanese swords and hand-guards which can be inspected at closer range by arrangement with Dr. Wu, curator, and his helpful staff. One could linger for days over other treasures in the Boston Museum of Fine Arts and can anticipate even better viewing of much of which is currently in storage, pending the late 1981 completion of its enormous new wing.

Art Schools

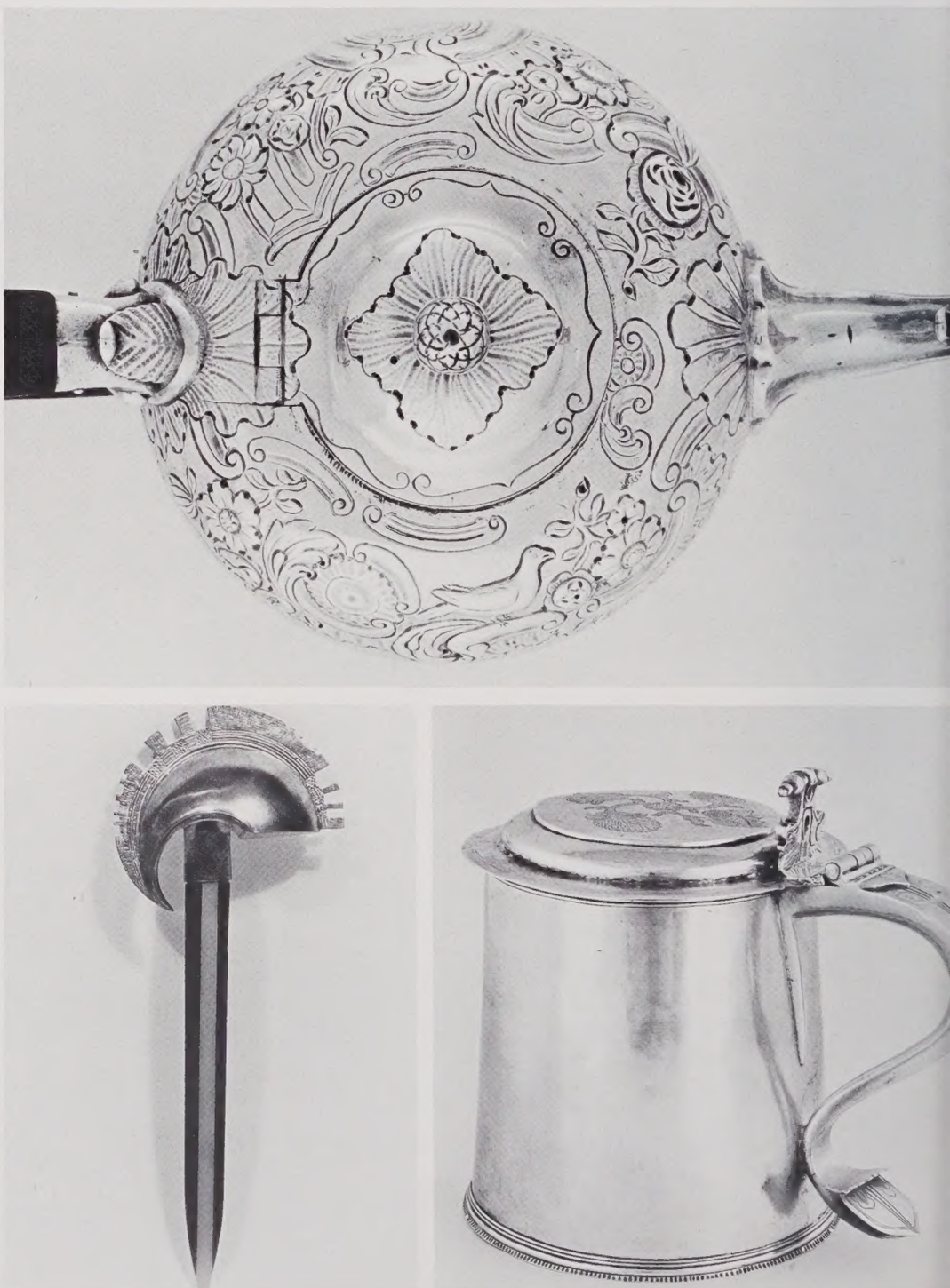
A few steps away from the MFA is the Museum School of Fine Arts. As Boston's oldest art school, it has gone through several phases of change and development from ultra-conservative and classical to avant-garde to today's more moderate stance. It currently projects doubling in size with construction of a new wing. The Metals Department staff, of David Austin, Peter Blodgett and Yoshiko Yamamoto, teaches a wide range of contemporary design and technique, with student work on display most of the time at the school itself and occasionally at the Museum.

A few more steps up the road from the Museum School is a delightful curiosity, a gracious Venetian palazzo, replete with beautifully flowering glassed-in atrium. This former home of the late Isabella Stewart Gardner is now a museum bearing her name and showing her diverse collection of art and artifacts. The palazzo, although primarily a 19th-century copy of an 11th-century style does contain many imported walls, porticos and so on. For the metalsmith, there are interesting wrought-iron gates, suits of armor, jewelry, and all kinds of surprises in dim corners—well worth an afternoon's looking.

A few blocks away from the Gardner is the Mass. College of Art where the Metals Department, with John Wescott, Jill Slosberg and Jana Longacre, is fully involved with the contemporary mode. In the active Sculpture Department, George Greenamyer and Doc Legg are doing dynamic metal sculpture, often on a grand scale.

A few more streets to the northwest of Mass. College is the large and complex campus of Boston University, the home of the five-year-old Program in Artisanry. P.I.A. houses departments of clay, fiber, wood and metals. It also has a unique course in designing and making stringed musical instruments, such as lutes, guitars, mandolins and dulcimers. The Metals Department, with J. Fred Woell, Patty Daunis-Dunning and Vincent Ferrini, encourages its students to develop solid technical mastery coupled with strong individual design orientation. Students also take courses in small business development and operation. Its recent graduates have won honors in the *Young Americans: Metal* juried exhibition, while others are already showing in galleries, designing for industry and operating their own studios and sales outlets.

Further into the western suburbs, in the quiet and elegant town of Lincoln, is the DeCordova and Dana



Above: Paul Revere II, *Teapot,* silver, 5⅞"h.x3¼"d., ca. 1760–1765. Pauline Revere Thayer Collection. Courtesy, Museum of Fine Arts, Boston
Left: Eileen F. Taylor, *Hair Piece,* bronze, brass, acrylic, fabricated, 8x3½x1½". School of the Museum of Fine Arts, Boston
Right: Robert Sanderson, *Tankard,* silver, 8-3/16" h.x6⅝"d., ca. 1637–1710. Gift of John S. Ames and Mary Ames Frothingham. Courtesy, Museum of Fine Arts, Boston
Far Right: Boehme, *Creampot,* silver, 7-11/16"h., 1774–1868. Gift of Martha May Eliot and Miss Abigail Adams Eliot. Courtesy, Museum of Fine Arts, Boston

Museum, which houses a well-respected metals department in its intimate and beautifully sited school. The department was started a number of years ago by the indomitable Florence Hollingsworth, who continues to teach classical silversmithing there, along with Reino Martin, Paul Bryant and Paula Dinneen (herself a recent graduate of B.U.'s Program in Artisanry).

The "local" aspect of the Boston metals scene is noteworthy, paralelling as it does the livable size of the city and the penchant for tradition and long-term commitment. It is also interesting to note that of the personnel of the various schools mentioned, Hollingsworth, Martin, Bryant, Yamamoto and Ferrini, all studied at the Museum School at various times in their training.

Galleries and Studios

The physical compactness of Boston makes gallery hopping easy. Most art galleries are on Newbury Street; there are also various shops which feature metals, such as that of John Lewis. John has held forth for many years, continually upgrading his design and display. Also on Newbury Street is the Harkus Krakow Gallery, which features metal sculpture and jewelry, frequently avant-garde and often the work of New York artists. The current owners used to be connected with Sculpture to Wear Gallery, which was located at the Plaza in New York. Westminster Gallery is relatively new to the street and features metal sculpture, while, a few doors down, Alianza has some interesting traditional and contemporary Mexican metals and some work by local craftsmen as well. The Society of Arts and Crafts has been a Newbury Street fixture for generations, being the oldest craft organization in these parts. At one time suffering from a stodgy image it now promotes the work of young local artists.

There are also elegant, private ateliers tucked away in various parts of the city and its suburbs. By appointment only, one can visit the tastefully spare showroom of Miye Matsukata (Janiye) and marvel at her inspired jewelry produced in her small, efficient workroom by Miye herself, Alexandra Watkins and Nancy Michel.

Across the Charles River in Cambridge, near Harvard University there is also shop and gallery activity. By appointment only, one can visit Henry Shawah in his elegant studio, which is an integral part of his spacious apartment in a high-ceilinged Victorian building. Hank produces fanciful gold jewelry and art objects and markets them nationwide as well as locally. He also is actively involved in producing informational programs with the Museum of Fine Arts, Boston. To the West of Harvard Square, along Brattle Street, there are many small shops worth visiting, and over on Huron Avenue is the Friends Gallery, where one can find the unique 22k gold and wrought-iron jewelry of Barbro Ulander. Returning to "the Square" once more, one should stop by Ten Arrow Steet Gallery to see what Betty Tinlot is featuring. Her shop-gallery has been instrumental in popularizing the work of a host of young designer-craftsmen in metals and other crafts. And so it goes throughout the city and its suburbs. There are too many good metalworkers in the area to adequately cover here. There are also some older tin and coppersmiths, spinners and platers in the industrial section of Cambridge and Somerville, and even a young man with newer ideas about coppersmithing, Ned James, who has his studio in Charlestown.

Metalworking Supplies

Boston also has its own Jewelers Building in the heart of the downtown shopping district. In this building are literally hundreds of tiny shops where jewelry is made, repaired and sold. This availability of supplies and service outfits is a boon to local metalworkers. There are also numerous interesting antique shops and hardware stores abounding with all manner of early Americana, from brass escutcheon plates to betty-lamps, some authentic, many reproductions.

For an offbeat treat, one should visit Quincy Market and Faneuil Hall, located just below Boston's new and architecturally exciting City Hall. Among the slick and colorful restaurants, food shops, clothing shops, galleries and boutiques, one finds a few places of greater interest, such as the Brass and Bounty. This shop is chock full of brass artifacts, some which approach art. Some of its wares are authentically old, some garishly new and some Oriental in character, a play on the reknowned "China Trade" which was headquartered in Boston in the 18th and 19th centuries. My personal preference at Quincy Market is the exuberent contents of a gallery called Pavo Real, which features extraordinarily colorful, life-size and lifelike papier maché tropical animals, produced in Mexico. For a real-mind boggling experience go to the rear of the gallery and see life-size and lifelike tropical animals in extraordinary patterns and textures executed in multimetal laminations. The metals used appear to be copper, brass and tin, and although I do not know the details and working conditions of where they were constructed, they are amazing by anyone's reckoning.

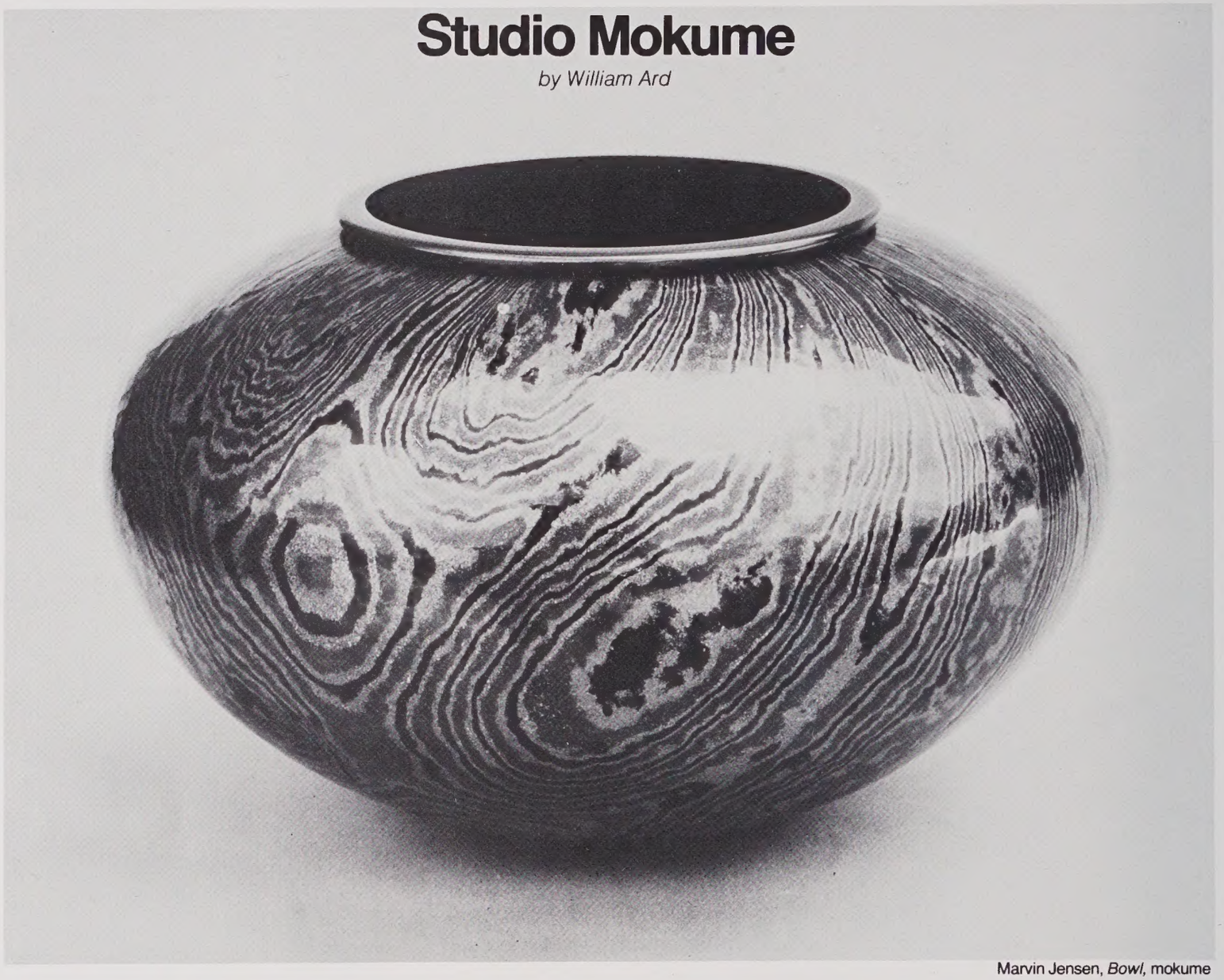
The future for metals in Boston looks bright and the competition keen. Boston is notoriously attractive to students, with its major educational institutions on just about every corner. These young people come to be where the action is. They like the livability of this city so much that they frequently stay and add their talents to its already vital atmosphere.

Vincent Ferrini, *a native Bostonian, has been operating a private jewelry and holloware studio for a number of years while teaching design and metals courses at Boston University since 1964.*

Above: American, *Kettle*, iron. Gift of Mr. Edward Jackson Holmes. Courtesy, Museum of Fine Arts, Boston
Below: Heidi Ergman, Mass. College of Art, Boston
Far Right: American, New York, *Teakettle*, turned silver, wood finial, 9½"h., 1700–1725. Anonymous Loan. Courtesy, Museum of Fine Arts, Boston

Studio Mokume

by William Ard



Marvin Jensen, *Bowl*, mokume

The following paper is the result of further research on mokume-gane carried out at the graduate metals program of Southern Illinois University/Carbondale by Professor Brent Kington, Professor Richard Mawdsley, Michelle Crespi, Bonnie Gwaltney and William Ard. The first paper produced by the group, "Return to the Forge (Extended Research into Mokume-Gane and Granulation)" appeared in Goldsmiths Journal *15, August 1979. The current research was generously funded by a grant from the National Endowment for the Arts and supported by the Office of Research and Development at SIU/C.*

The initial research into mokume-gane, culminating in our first technical paper was basically an attempt to demystify the process. Our purpose was to understand the basic metallurgical principles involved and to duplicate the process as it was originally conceived.

This research looked into the diffusion lamination of dissimilar nonferrous metals by means of a coal forge and, later, a hybrid forge/kiln. It was felt that the reduction environment of the forge was the key to successful lamination and warranted its use, despite the problems involved with its application in the average studio.

An important factor in our previous success was the development of the torque plate: the two steel plates between which the mokume stack is bolted for firing. The torque plate assures a positive, airtight seat between the layers and helps promote crystalline growth between the alloys at welding temperature.

Still convinced of the necessity of the reducing environment in a consistantly reliable bonding technique, we began to look for a way to localize a reduction atmosphere within the torque plate setup, which would allow the use of other heat sources.

The major drawbacks of the coal forge are that it requires an elaborate setup and a fair amount of expertise. These considerations led us into the exploration of the kiln as a clean, readily available firing method that is suitable for any studio. And we began a series of experiments to create a forge-like environment within the kiln.

Another main objective of our new research was to develop a broad color palette of bondable alloys. We had previously experimented with a group of metals that included copper and its alloys, shibuichi, shakudo and kuromido, as well as silver and gold. Our present goal was the development of a full range of shibuichi alloys, from one bearing only 2% silver to one of actual silver color. This was partially in an effort to find substitutes for what were then $50/per ounce sterling and $30/per ounce shakudo. We were concurrently to test a broad spectrum of bondable gold alloys for jewelry.

In the course of the new work several developments in laminating technique were found useful. A mechanical development was the use of a heavy bench vise before and after firing. Before firing, the billet in its torque plate was put in the vise to help achieve the tightest possible seat between the layers. After firing, the billet was returned to the vise while still at a red heat. This replaced the use of hammer blows to kinetically forge the bond.

Another development was the extensive use of multiple laminations and multiple pattern development stages. Taken to its logical conclusion, this technique resulted in mokume "veneering" and increased the use of our patterned material by as much as 500%.

In the generally experimental attitude which produced several dozen "expendable" mokume billets, there was time to get philosophical about traditional views of mokume-gane and the relationship of pattern to form. Some of our conclusions and observations are included in the last section of this paper.

The previous is a synopsis of last year's research at SIU-Carbondale; what follows is a more detailed account of our experimentation and developments.

New Alloying Technique

In pouring our palette of shibuichi alloys, we used smaller one- to three-ounce lots for some experiments and 10- to 15-ounce lots for others. A new pouring method was used on the smaller lots, which invariably produced very clean, malleable billets, apparently free of oxygen contamination.

The method is a technique of pouring the metal through standing water that Richard Mawdsley learned at a workshop at California State University with Satsuo Ando, a Japanese master metalsmith.

Clean cotton material is draped over a metal cylinder and allowed to form a smooth, wrinkleless pocket which will become the mold (see page 52). The cotton mold is submerged in steaming water to a depth of four to six inches in a five-gallon container.

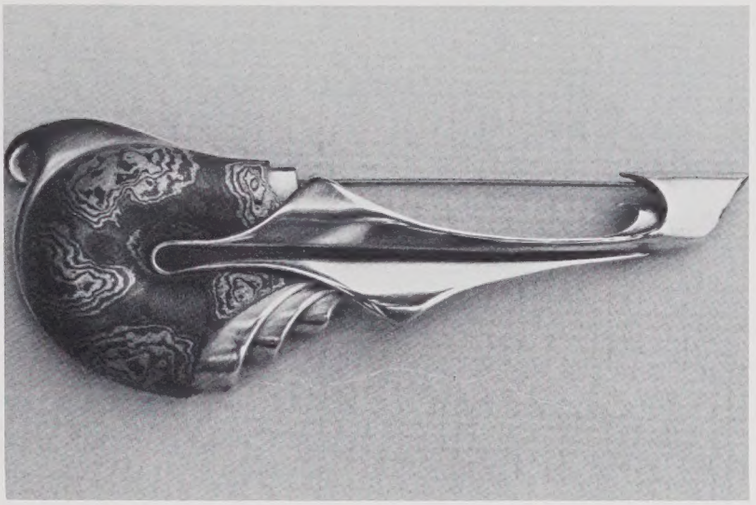
When the metal has been melted, fluxed and stirred, it is poured through the water into the cotton cup where it solidifies into a smooth, rounded nugget.

The fluxes used on these forge-fired alloys were copper flux for the low silver alloys and ammonium for the high range and gold alloys. All of the high silver shibuichis were inadequately mixed on the first pour, regardless of the temperature or the amount of stirring. Most had distinct spots or zebra stripes which disappeared after repeating the process.

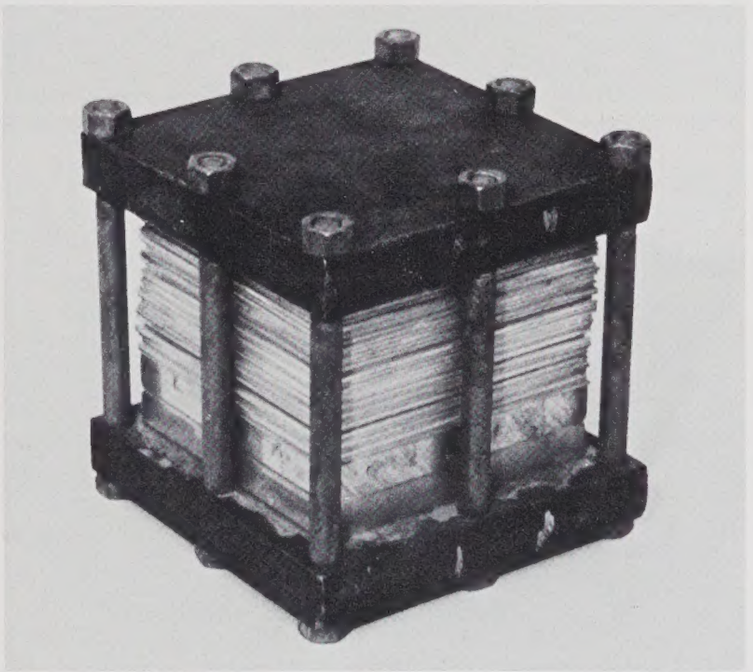
After several billets are cast in the Japanese method, the cotton begins to break down and will need to be replaced. Because of its saturation with water, however, the cotton does not burn or char and can be reused several times.

The method works equally well on large billets, but it must be considered that the metal comes out in a one-inch thick lump which must be forged down before it can be rolled into sheet. For this reason we switched to steel ingot molds for lots larger than three ounces.

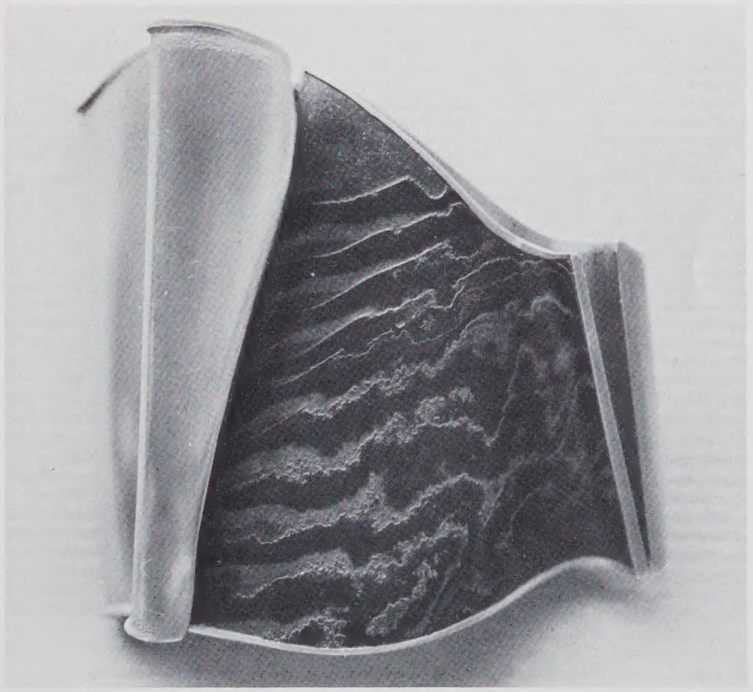
After pouring, we stress the value of a test for shortness. Forge on the nugget or bend the billet in a vise to see if it cracks or breaks. Remelt any billet that shows signs of brittleness. The billet passed without testing at the end of a hard day because it looks nice is the one that will roll out into sheet which will fail.



Bonnie Gwaltney, *Marine Series: Pin 7,* sterling, mokume (shibuichi, copper), 3¼x1⅛"



Torque plate containing 4x4" cube of 32 layers and two bus bars ready for firing



Michelle Crespi, *Folded Form 1,* sterling, mokume (shibuichi, copper, kuromi-do), 1¾x1¾"

Alloy Experimentation

Our alloy experiments basically fell into three groups: the low-silver shibuichis, the high-silver shibuichis and the gold group. Specific characteristics of the shibuichi groups are compared in Table 1.

Shibuichi is an alloy of copper and silver first used in the sword furniture of medieval Japan. The most popular shibuichi was a formula consisting of 67% copper and 32% silver. (See *Metal and Metalworking in Old Japan* by William Gowland, pp. 90–94.)

As our experimentation with the alloy was designed to find its possible color range, we began to introduce the silver gradually, in increments of 2%. Once it was clear that a 2% change would alter the color visibly and predictably, we began to bracket in jumps of 5% until an actual silver color change was obtained.

When the full range of shibuichi alloys was cast, the research team split into two groups to test the alloys individually under a variety of working conditions. Each member then used a random selection of alloy samples in a series of mokume billets. The object was to subject each alloy to the widest possible range of conditions and minimize the individual human error. The properties ascribed to the following alloys are the average results and should be viewed as such.

Properties of the low-silver shibuichis (2%–10%) were very much like those expected of

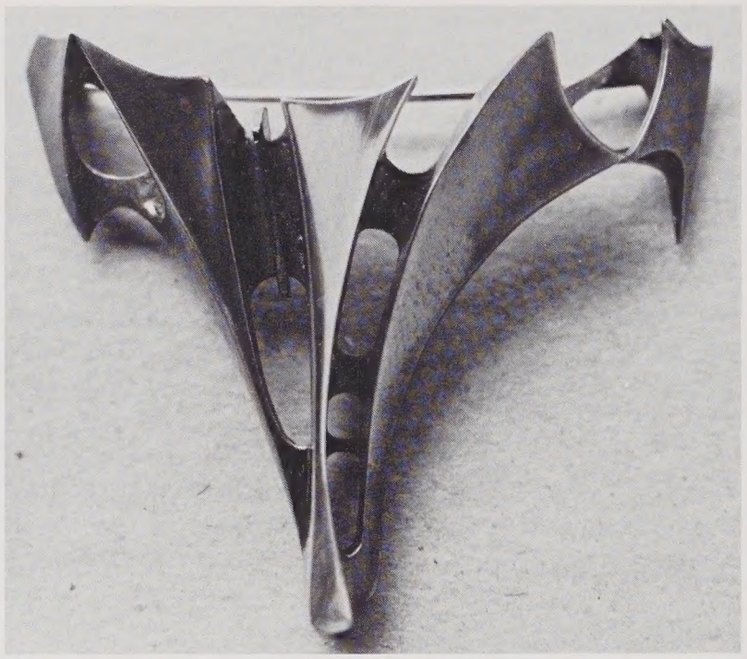
raw copper. Each alloy worked easily hot or cold, rolled out easily and bonded well in a mokume billet. Each alloy was progressively paler than copper and showed good contrast when patinaed in rokusho (rokusho is the chemical patina used to differentiate the alloys exposed in a mokume pattern. SIU-C is preparing a paper on traditional rokusho formulas and other patinas to be released next spring), coloring them from a dark gray at 2% to a pale gray at 10%.

The high-silver shibuichis (15%–35%) presented some surprises both in working characteristics and coloring. The addition of 15% silver produced an alloy very pink in color, much like a pale red-gold. Working characteristics of the 15% and 20% metals proved to be similar to those of bronze—very stubborn, with a tendency to be short both hot and cold. We felt that both of these alloys would be excellent casting materials, having poured into beautiful billets. But used in a mokume laminate they had to be treated very carefully, annealed frequently and worked lightly. Both alloys appeared very pale after pickling and patinaed a light persimmon color.

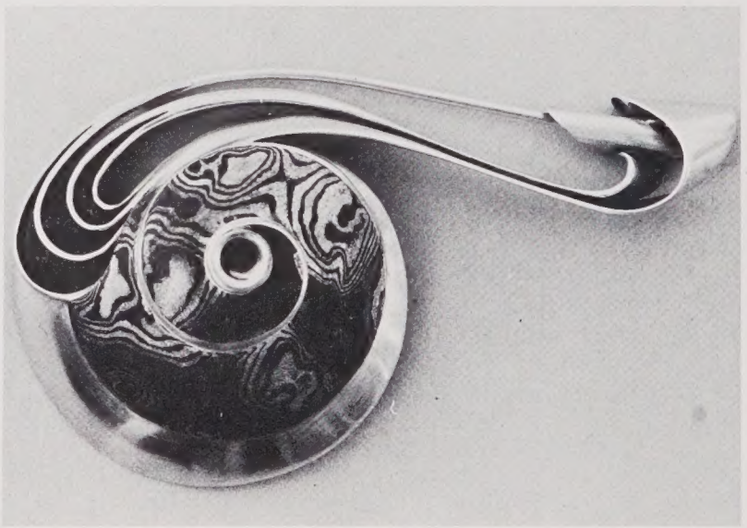
The 25% shibuichi was very light in color and appeared to be as tough as the previous two. It was not as short, however, requiring some care in working hot, but it forged and rolled well cold. Like the 30% alloy, the 25% was bonded and ultimately subjected to extensive twisting, drawing and raising and was found to be a very satisfactory laminating material. Both alloys appeared a whitish pink after pickling and rokushoed from gray-brown to a light yellow-brown.

The 30% and 35% alloys both worked easily, the 35% behaving very much like fine silver. It was found to work well at low temperatures, or cold, and laminated very well. Used in fabrication and mokume as a possible silver substitute, the 35% was very white with a pale rose blush. Once pickled, the alloy looked like silver and patinaed from brown to gold in rokusho.

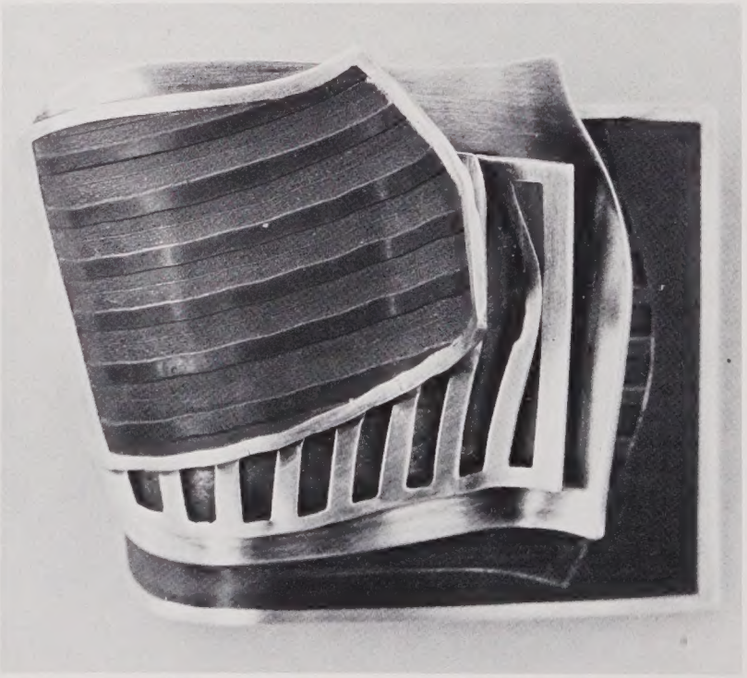
Alloying our own golds, we found that they all bonded well with the copper alloys. All golds: 20k, 18k, 16k yellow, red or green bonded to shakudo and made an excellent mokume for jewelry.



William Ard, *Pin,* high-silver shibuichi, hollow construction, patinaed nut brown, 1½x1½"



Bonnie Gwaltney, *Marine Series Pin 8,* sterling, mokume (shibuichi, copper), 2¾x1½"



Michelle Crespi, *Folded Form 3,* sterling, mokume (shibuichi, kuromido-do, copper, shakudo), 1¾x1½x½"

One of the best combinations was 20k yellow with shakudo. The gold was alloyed from 24k with two parts of silver for each one of copper, producing a satisfactory yellow with more malleability than one with equal parts silver and copper. The shakudo was copper with 5% gold.

The resulting laminate was very tough, allowing severe handling during complicated pattern development with no appreciable delamination. After applying the patina, the gold pattern was isolated by the rich purple-black of the shakudo.

Generally, we can say that gold bonded well to almost anything. Problems began to arise when using silver and gold together, however, as the alloy that forms between them has markedly different working characteristics. Lacking tensile strength, this thin layer of silver-gold alloy gave up under many kinds of pattern development, ruining the billet. If silver and gold are desired together in the same pattern, one of the high-silver shibuichis is suggested.

The most important consideration is to match the various alloys' characteristics. It is necessary to bond high-karat golds with softer materials, for instance, and low-karat golds with hard ones to preserve an even malleability in the billet.

It is also important to match the alloys with their intended uses and pattern development techniques. It is not advisable, in other words, to use a high-karat gold in a belt buckle or use a gold-to-silver laminate for a twist pattern.

Bonding with the Kiln

For reasons of availability, all of our first experiments were done in an electric kiln. In fact, we used the same three-element, 12"x12"x16" enameling kiln commonly used in most studios.

When the decision was made to work with the kiln, it was understood that provisions would have to be made to secure as nonoxidizing an atmosphere as possible. Billets fired in the electric kiln alone usually bonded, but there was chronic separation of layers up to one-half inch into the billet, which we attributed to the oxidizing nature of the kiln.

Original efforts to correct this were attempts to actually change the environment within

the firing chamber. Blocks of hardwood charcoal were placed around the billet to form an internal reduction furnace, but the gradual reduction of the amount of charcoal used produced no significant change in the bond. Eventually the charcoal was replaced completely by painting the outside of the mokume stack with hide glue (available from Sears) and allowing that to carbonize in the kiln.

Through our research into granulation reported in the first paper, we had become familiar with the reducing action brought on by the presence of carbon at the fusion point. Experimentation has shown that the simple presence of carbon near the joints of the mokume stack acts as enough of a reducing agent to improve the quality of a kiln-fired laminate.

Some attempts have been made to improve the evenness of the carbon coat. At welding heat the glue no longer seals the billet because, while carbonizing, it also cracks and blisters. To create a more solid coat, inert materials, such as yellow ochre were mixed with the glue, but there was no significant difference observable in the weld. It is possible that another organic material might be used to create a thicker, more even layer and a less oxidizing atmosphere.

Taking the carbon coat idea from the electric to the gas kiln, we began to experiment with our burnout oven to obtain a welding heat there. We hoped that the gas environment would prove to be more beneficial.

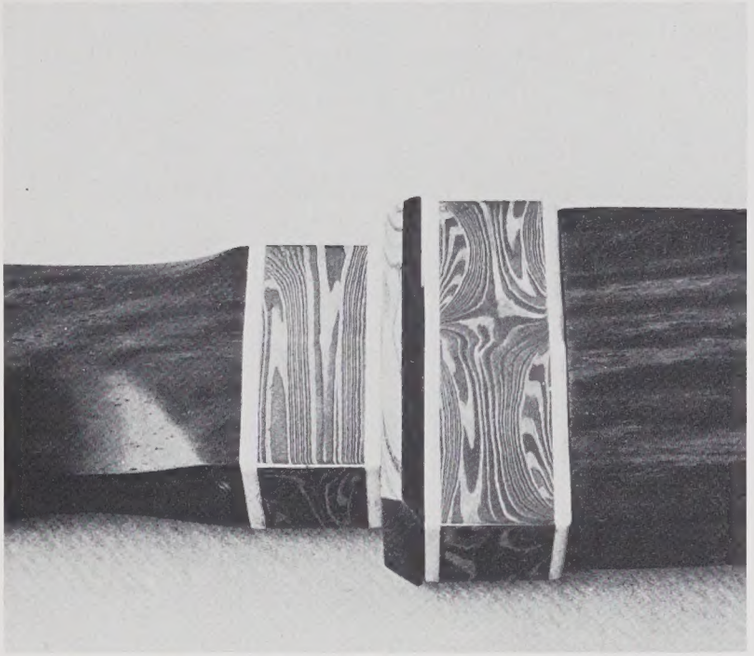
It occurred to us that the fundamental difference between the heat of the forge and that of the electric kiln was the absence of CO_2, water and other by-products of combustion. Since the atmosphere within the kiln is composed simply of superheated, rarefied air, it seemed possible that, even with the carbon coat, we were subjecting the laminates to too much oxidation.

With the gas kiln, most of the oxygen available is used for combustion, and the chamber is filled with inert gases, as in a potter's reduction fire. From our first test with gas it was obvious that it was a superior firing method. There was no failure to laminate, even to the outside edge of the stack.

It is still necessary to trim up to one-eighth inch from each face of the billet because of the uneven surface resulting from inexact stacking. Each crevice between the layers is a stress riser that can split the billet during forging—even a billet that is perfectly bonded.

Uneven stresses can damage some billets, even after the edges have been removed. Our experiments using edge slices of a copper-brass laminate failed consistantly until we soldered the edges of the slice. The pressure of the rolling mill was causing the laminate to split apart until the stress on the edge was neutralized by the solder.

Some of the gold laminates split badly on the ends as they were drawn into wire. We were also able to stop this by soldering just the tips of the wire before drawing.



Phil Baldwin, *Nightfighter IV*, detail, multiple laminate

Phil Baldwin, damascus sketches, jellyroll, two composite twists

Phil Baldwin, *Stars and Galaxies*, damascus steel pattern

The Welding Heat

Our previous research with the forge indicated a reliable welding point at about two-thirds of the melting temperature of the lowest melting alloy. This is a characteristic of the diffusion weld, where the metals are bonded at a temperature significantly lower than their melting points. For the average copper system, this meant diffusion would occur gradually between 1400° and 1650°F. Copper-silver systems would weld between 1100° and 1400°F.

With the kiln, we found the welding temperature to be higher. While diffusion had occurred in the copper laminates by 1400°F., the bond was weak and immature. For the kiln, a more reliable rule of thumb was to fire around 200°F. below the melting point of the lowest melting alloy. Heats of 1600°F. were not uncommon.

Because of the temperature drop involved in opening the kiln door, a constant visual check on the billet (as with the forge) was not possible. Not being able to use visual indicators, we worked out a set length of firing time. By experimenting with soak times in a preheated kiln we found we had to lengthen the firing time to one hour, on the average, for a two and one-half inch cube. The longer soak was necessary because the intense 2000°F.+ heat of the forge was not available in the kiln, and the heat to welding temperature was more gradual.

Shop Developments

One of the developments that made shop production of mokume easier was the use of the four inch bench vise. Used before firing, it cut back preparation time by crushing the layers of the mokume stack together evenly and much more tightly than the tightening of the bolts alone.

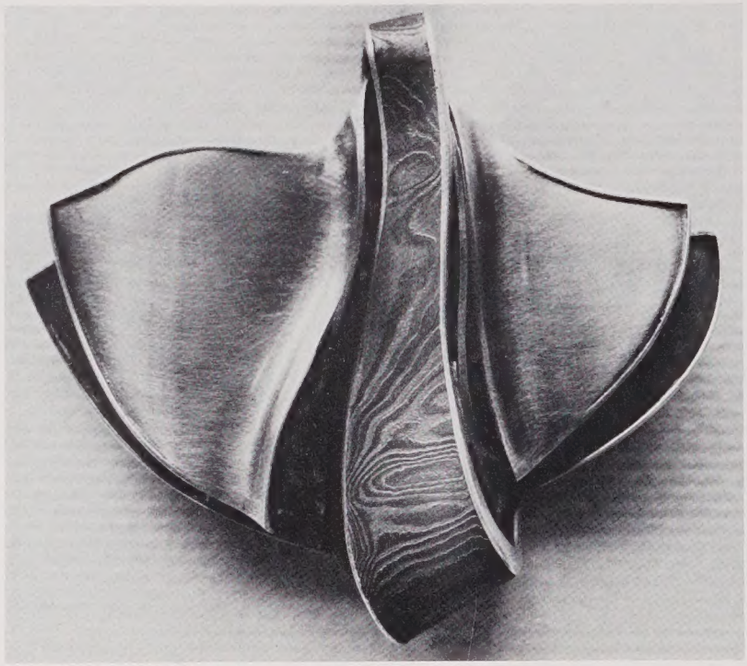
After firing, the vise takes the place of the hammer in forging the weld. We have long felt that forging the billet down to half its original thickness significantly improves the quality of the weld. The hammer applies the pressure unevenly and gradually as the billet cools. We felt this action created stresses within the laminate that would account for occasional cracks and layer separation.

The vise avoids all of that by applying powerful pressure evenly and quickly while the billet is still red hot. Again, it is necessary to be mindful of which alloys you are working with and what their working characteristics are. It is possible to over press a billet and ruin a particular hot-short alloy in it.

We were sufficiently taken with the ease of vise-forging and the quality of the joints obtained that we highly recommend its use over the hammer in the initial forging of the weld. Just remember to space the bolts in the torque plate so that they fit around the jaws of the vise.

A hydraulic press made from a 20-ton truck jack (see the press design in Marc Paisin's technical paper, "Practical and Inexpensive Hydraulic Pressing and Die-Forming for the Artist/Metalsmith," *Goldsmiths Journal* 15, 1977) was also employed as a forging method. This provided considerably more pressure than the vise and was used often in the metal preparation stage to crush the stack together for bolting.

As a hot forging tool, however, the press had a large potential for misuse. The kinetic energy released by the press can actually increase the heat of the billet from welding to melting temperature. This can result in squeezing pockets of a particular alloy out of the laminate. Also, if you are using an alloy that is hot-short or if you are laminating a hard metal to a soft one, there's an obvious potential for overusing the press.



Michelle Crespi, *Pin 5,* sterling, copper, mokume, 2x2½"

Phil Baldwin, *Ring,* gold and mokume (shakudo)

Table 1. Comparison of Test Alloys

Silver Content	Color of Metal	Malleability Hot	Malleability Cold	Strength Bonded	Color When Patinaed*
2%	copper	good	good	excellent	dark gray
4%	copper	good	good	excellent	dark gray
6%	copper	good	good	excellent	dark gray
8%	copper	good	good	excellent	pale gray
10%	light red	good	good	excellent	pale gray
15%	pink	poor	poor	good	gray-brown
20%	pink	poor	poor	fair	persimmon
25%	pale pink	fair	good	excellent	gray-brown
30%	pale pink	fair	good	excellent	light brown
35%	white w/rose blush	good	good	excellent	gold

*Variables in surface preparation, rokusho strength and formula, as well as time spent in the patina, all contribute to a varible color range. Contrast between the alloys is always evident, however.

In short, the vise is simpler, more readily available and does the same job with a little more effort.

Other mechanical aids which eased shop production were a Reitter air hammer and a nine inch rolling mill. The power hammer greatly reduced the amount of time needed to forge a large billet into manageable plates, and the large-capacity mill eliminated the need to forge the plates into sheet.

A less extravagant aid, which considerably reduced preparation time, was the discovery that a good bond can be achieved despite fairly rough surfaces on the layers. It was previously thought that the cleaner the surface, the better the bond, but, in actuality, only the obvious scratches or surface pits need sanding out. Progressively rougher surfaces were allowed in one set of experiments, from 400 to 80 grit wet or dry paper, and no difference was discernible in the bond. A thorough cleaning and degreasing was absolutely necessary, though; and for this we use either soap and pumice or rotten stone.

Pattern Development Experimentation

In our first paper, experimentation in pattern development ended after exploration of the traditional methods of material removal, surface distortion, edge forming and twisting. Of the original team, only Phil Baldwin continued to experiment with advanced patterns in the direction of multiple lamination designs. A good example of this direction is the complicated patterns on his blade fittings.

Occasionally working out his pattern ideas in damascus steel sketches, Phil concentrated on pushing mokume to its limits. His "son of damascus" experiments involved the relaminations of complicated twists and splits, often rewelding an intricate design yet again onto a broader pattern.

Often the only limits imposed on his pattern ideas were the physical properties of the alloys themselves. Nonferrous alloys cannot withstand the stress that ferrous ones can, so some of Phil's mokume designs were destined to remain sketches in steel.

Following more traditional pattern development techniques, multiple laminations

have since been used to more tightly control pattern design. If the layers of a mokume billet are exposed when the billet is still quite thick, broad, generalized designs will result when the billet is rolled into sheet. Cutting a pattern on a billet which has already been rolled to 12 or 14 gauge gives an end result with much tighter lines and removes the element of randomness imposed by the rolling process. But the depth to which it can be cut is limited to the thickness of the final sheet.

For this reason, we began to forge our billets down to at least 50% of original thickness to do broad pattern development, then relaminate onto another bus bar to do fine pattern cuts. Sometimes this process would be repeated several times until the bulk of the material was composed of the copper bus bar. This series of relaminations and multiple pattern cuts allowed us great control over design, an easy mixture of broad and detailed pattern elements, and freedom to use 100% of the layered material for patterning. There was also the coincident advantage of stretching our material by several hundred percent as we added one more bus bar.

Eventually, the point was reached where the mokume was little more than a thin veneer on the copper sheet. Mokume veneering could have some exciting applications in areas such as raising, allowing the artist to use some very expensive materials on a lavish scale. The absolute limit to veneering was encountered by one researcher, however, in the development of a beautiful, smoky pattern veneer which completely etched away in the pickle.

Another advantage to choosing later stages for pattern development is the reduction of waste. Previously we cut grooves in a one-half inch plate of mokume with a ball end mill, producing a mound of shavings. The plate was then rolled out into a sheet and the best part of the pattern was cut out and put to use, producing a pile of scraps.

This loss was accepted as a matter of course until the price of silver made shibuichi a precious material. Now, through multiple pattern development stages, most of the pattern can be worked out on a one-quarter inch thick sheet, requiring much less material removal. The process also allows periodic monitoring of the pattern as it forms, making it possible to avoid losing areas to uninteresting pattern elements.

At this point it would be good to stress the ease of making an absolutely worthless pattern. It is almost essential, unless you are lucky, to have a pretty good idea of what you want before you begin pattern development.

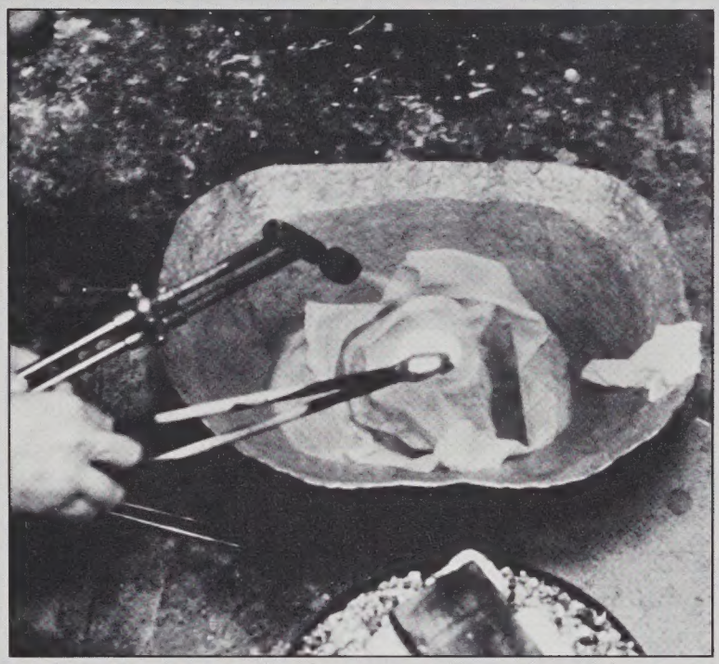
At first it will seem that you can do no wrong; a few simple cuts produce an exciting woodgrain effect that seems all the more natural for its randomness. This satisfaction with the "instant art" aspect of mokume is what we call the plywood syndrome. Broad patterns can be successfully done this way, but reliance on random cutting and the surprise factor produce patterns that have a similarity which overcome any sense of artful originality. The mokume then becomes like so many sheets of plywood and it doesn't matter which one you use.

On the other extreme, there is the tendency to get very precious about the mokume itself, calling a particularly nice pattern "art" before you do anything with it. Mokume is technique and not an end in itself.

More than anything else, our objective in the development of a subtle color palette and the use of multiple laminations and pattern development stages was to reintroduce the hand of the artist into a technique given to "happy accidents."

What we have done by the introduction of the torque plate and by removing the process from the smithy to the studio is to simplify the process enough to make lamination a readily available tool and perhaps to promote experimentation in the field.

Satsuo Ando Pouring Method



Pouring through standing water

The Japanese method of pouring alloys through water was taught at a workshop with Satsuo Ando at California State University at Fullerton. The method invariably produced clean billets devoid of the brittleness sometimes associated with casting one's own alloys.

The apparatus is fairly simple. Take a coffee can or a large soup can at least three inches in diameter, remove the top and bottom and then cut the lower two inches into a tripod to allow for water circulation.

Then take five layers of pure cotton material (cloth diapers work well) and stretch the first two into the can. Tie the layers on the outside with wire and secure them on the inside with a wire ring, making a taut floor about one inch below the rim.

The top three layers are then draped over the can to form a smooth pocket, which will become the mold for the billet. These can be weighted around the edges to keep them from shifting while under water.

Submerge the mold in a container of at least five gallons of steaming water, and you're ready to pour. The temperature of the water is important, if not critical: if it is too cold, the metal will freeze into strange nodules; too hot and the metal cools too slowly, producing a large crystalline structure and shortness. The best temperature is somewhere in the steaming range, where it is still possible to put your hand in the water.

The key to a successful pour is to minimize contact with the air and prevent oxygen contamination. After the metal is melted, fluxed and stirred, we usually add a few wood chips to burn and reduce the oxygen in the mouth of the crucible as it is removed from the heat. Then the metal is poured as close to the surface of the water as possible.

Once poured, the water inhibits further oxygen contamination and the metal cools gradually into a smooth, rounded nugget.

This method appeared to be especially helpful in pouring some of the more difficult gold alloys, such as 16-karat red, which always seems to cast short. The billets poured by this method were almost always clean and malleable.

When cool, the nugget is flattened slightly and forged flat on four sides. This causes the billet to roll out into a rectangular sheet and cuts down on waste.

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Gowland, William, *Metals and Metalworking in Old Japan,* Japan Society, London Transactions, V. 12, 1914–1915

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Issues: Consignment Agreements

Metalsmiths and gallery owners alike are continually faced with the problem of communication about the pricing, sale and accounting of artwork. Selling on consignment is a necessity for many gallery owners due to the high purchase price, even at wholesale, of jewelry and metalwork. The risk to the craftsman of consigning works can be minimized by preparing an agreement which both parties sign and retain copies of. The gallery owner can also benefit from a written agreement which informs the craftsman of store policies and procedures. With the craftsman more at ease with the business aspect, it is hoped that cooperation and understanding of the value of the work of both parties in selling will be furthered.

Here we present some prototype consignment contracts, prepared by lawyers, gallery owners and craftsmen themselves.

The contract below was drawn up by Tad Crawford, lawyer and author of such books as *Legal Guide for the Artist,* and Susan Mellon, jeweler and manager of a not-for-profit craft shop in a community art center in New Haven, Connecticut, under the auspices of the Artists/Craftsmen's Information Service.This contract is part of a pamphlet entitled *The Artist-Gallery Partnership: A Practical Guide to Consignment,* which is available from the American Council for the Arts, 570 Madison Avenue, New York, NY 10022.

Standard Art Consignment Agreement

The Artist (give name, address and telephone number): _____

_____

and the Gallery (name, address and telephone number): _____

_____

hereby enter into the following Agreement:

1. *Agency; Purposes.* The Artist appoints the Gallery as agent for the works of art consigned under this Agreement ("the Artworks"), for the purposes of exhibition and sale. The Gallery shall not permit the Artworks to be used for any other purposes without the written consent of the Artist.

2. *Consignment.* The Artist hereby consigns to the Gallery, and the Gallery accepts on consignment, those Artworks listed on the attached Inventory Sheet, which is a part of this Agreement. Additional Inventory Sheets may be incorporated into this Agreement at such time as both parties agree to the consignment of other works of art. All Inventory Sheets shall be signed by Artist and Gallery.

3. *Warranty.* The Artist hereby warrants that he/she created and possesses unencumbered title to the Artworks, and that their descriptions are true and accurate.

4. *Duration of Consignment.* The Artist and the Gallery agree that the initial term of consignment for the Artworks is to be _____ (months), and that the Artist does not intend to request their return before the end of this term. Thereafter, consignment shall continue until either party requests the return of any or all of the Artworks, at which time those Artworks shall be returned promptly.

5. *Transportation Responsibilities.* Packing and shipping charges, insurance costs and other handling expenses incurred in the delivery of Artworks from the Artist to the Gallery, and in their return to the Artist, shall be the responsibility of the _____ (specify Gallery or Artist).

6. *Responsibility for Loss or Damage; Insurance Coverage.* The Gallery shall be responsible for the safekeeping of all consigned Artworks while they are in its custody. The Gallery shall be strictly liable to the Artist for their loss or damage (except for damage resulting from flaws inherent in the Artwork), to the full amount the Artist would have received from the Gallery if the Artworks had been sold. The Gallery shall provide the Artist with all relevant information about its insurance coverage for the Artworks if the Artist requests this information.

7. *Fiduciary Responsibilities.* All proceeds from the sale of the Artworks shall be held in trust for the Artist. The Gallery shall pay all amounts due the Artist before any proceeds of sales can be made available to creditors of the Gallery. Title to each of the Artworks remains in the Artist until the Artist has been paid the full amount owing him or her for the Artworks; title then passes directly to the purchaser.

8. *Notice of Consignment.* (Not necessary in states with art consignment statutes that overried 2-326 of the Uniform Commercial Code—inc. Wisconsin, New York, Texas, Massachusetts.) The Gallery shall give notice, by means of a clear and conspicuous sign in full public view, that certain works of art are being sold subject to a contract of consignment.

9. *Removal from Gallery.* The Gallery shall not lend out, remove from the premises or sell on approval any of the Artworks, without first obtaining written permission from the Artist.

10. *Pricing; Gallery's Commission; Terms of Payment.* The Gallery shall sell the Artworks only at the Retail Price specified on the Inventory Sheet. The Gallery and the Artist agree that the Gallery's commission is to be _____% of the Retail Price of the Artwork. Any change in the Retail Price, or in the Gallery's commission must be agreed to in advance by the Artist and the Gallery. Payment to the Artist shall be made by the Gallery within _____ days after the date of sale of any of the Artworks. The Gallery assumes full risk for the failure to pay on the part of any purchaser to whom it has sold an Artwork.

11. *Promotion.* The Gallery shall use its best efforts to promote the sale of the Artworks. The Gallery agrees to provide adequate display of the Artworks, and to undertake other promotional activities on the Artist's behalf, as follows: _____

_____

The Gallery and the Artist shall agree in advance on the division of artistic control of the financial responsibility for expenses incurred in the Gallery's exhibitions and other promotional activities undertaken on the Artist's behalf. The Gallery shall identify clearly all Artworks with the Artist's name, and the Artist's name shall be included on the bill of sale of each of the Artworks.

12. *Reproduction.* The Artist reserves all rights to the reproduction of the Artworks except as noted in writing to the contrary. The Gallery may arrange to have the Artworks photographed, however, unless the Artist specifies otherwise, any such photographs may be used only to publicize and promote the Artworks through means to be agreed on by both parties. In every instance of such use, the Artist shall be acknowledged as the creator of the Artwork. The Gallery shall include on each bill of sale of any Artwork the following legend: "All rights to reproduction of the work(s) of art identified herein are retained by the artist."

13. *Accounting.* A statement of accounts for all sales of the Artworks shall be furnished by the Gallery to the Artist on a regular basis, in a form agreed to by the parties, as follows: _____

_____

(specify frequency and manner of accounting). The Artist shall have the right to inventory his or her Artworks in the Gallery and to inspect any books and records pertaining to sales of the Artworks.

14. *Additional Provisions.*

15. *Termination of Agreement.* Notwithstanding any other provision of this Agreement, this Agreement may be terminated at any time by either the Gallery or the Artist, by means of written notification of cancellation from either party to the other. In the event of the Artist's death, the estate of the Artist shall have the right to terminate the Agreement. Within 30 days of the notification of termination, all accounts shall be settled and all unsold Artworks shall be returned by the Gallery.

16. *Procedures for Modification.* Amendments to this Agreement must be signed by both Artist and Gallery and attached to the Agreement. Both parties must initial any deletions made on this form and any additional provisions written onto it.

17. *Miscellany.* This Agreement represents the entire agreement between the Artist and the Gallery. If any part of this Agreement is held to be illegal, void or unenforceable for any reason, such holding shall not affect the validity and enforceability of any other part. A waiver of any breach of any of the provisions of this Agreement shall not be construed as a continuing waiver of other breaches of the same provision or other provisions thereof. This Agreement shall not be assigned, nor shall it inure to the benefit of the successors of the Gallery, whether by operation of law or otherwise, without the prior written consent of the Artist.

18. *Choice of Law.* This Agreement shall be governed by the law of the State of _____.

_____ _____

(Signature of Artist) (Signature of authorized representative of the Gallery)

Date: _____ _____

(Title of Gallery representative)

Doug Steakley, metalsmith and owner of Concepts Gallery, Carmel, California comments on the contract as follows: Generally this seems like a good contract. I think it could be more specific in number 7, in the event of bankruptcy. If the title of the artwork remains with the artist until the piece of work is sold, then it should be made clear that, in the event of bankruptcy, the piece will revert to the artist and not be counted as part of the shop's assets.

There is also a slight problem with numbers 10 and 11. Many galleries are reluctant to give out the artist's name because a potential customer will contact the artist directly and receive a lower price on an expensive piece. I think the gallery should also be protected in a contract such as this with a clause that states that, so long as the work is being sold at a particular price through the gallery the artist will not sell the same or similar item at a lower price. With this clause, galleries will be more willing to give out the names of their artists. Gallery-artist relationships are like landlord-tenant relationships, everyone thinks the gallery/landlord is ripping the underling off—whereas, it often works both ways. Number 13 could be combined with number 10, and payment might better be relegated to a certain day of the month.

Finally, it might be worthwhile to mention that even with a good contract, if the person consigning artwork had doubtful feelings about the gallery, he should probably shop around. Also, I think it is a good idea, when possible, for the consignee to actually see the gallery and get a feeling for whether or not his work would fit in.

Below are the long and short forms of the consignment agreement that George D. McLean, jeweler and gallery owner, sends out with his work to be sold in other stores or galleries. The longer form is sent to new accounts or to accounts about which he has some doubts.

Gallery Agreement

Gallery name _____
Director's name _____
Gallery address _____
1. Period of Contract from _____
to _____
The contract may be extended by mutual agreement. Contract to terminate by the will of either party on 30 days written notice.
2. Number of pieces in consignment _____ Retail prices as listed. Itemized list attached.
3. Cost of shipping and insurance to gallery will be paid by G.D. McLean & Co. Return shipping and insurance from gallery will be paid by the gallery.
4. Gallery assumes full responsibility for work lost, stolen or damaged by any possible cause while in possession of, or in transit from, the gallery to any point of shipment. The gallery agrees to insure all items for this period.
5. Commission to gallery _____% to G.D. McLean & Co. _____% on the retail price listed, of all gallery sales of the items consigned by G.D. McLean & Co.
6. Conditions of payment: Outright sale, due 30 days. After 30 days, 1½% interest per month will be charged on the remaining balance.
7. Notification of sale _____
8. Partial payments are to be treated in the same manner as full payments according to the percentage stated above.
9. Returns by purchaser will be permitted by G.D. McLean & Co. within 15 days if unaltered or undamaged. However, if the item is altered in any manner, the gallery will assume all responsibility and the sale will be considered final by G.D. McLean & Co. After 15 days, G.D. McLean & Co. will consider that the gallery has made a bona-fide sale.
10. The gallery assumes the responsibility of customer's credit. All losses due to bad credit risk are to be borne in full by the gallery.
11. All reproduction rights are reserved by G.D. McLean & Co., as well as any and all copyright rights.
12. An inventory balance is to be sent every six months from the date of this agreement.
13. G.D. McLean & Co., or its representative, has the right to examine the gallery records pertaining to items consigned to the gallery.
14. The gallery may make arrangements with other dealers in other cities only by written agreement with G.D. McLean & Co. G.D. McLean & Co. will receive the same commission as above, and all other terms of this contract will apply.
15. Work from G.D. McLean & Co. must be shown by the gallery as long as the terms of this contract are in effect.
16. The gallery agrees to provide a statement of account within 15 days of the end of each calendar quarter.
17. Additional clause:

Signed for G.D. McLean & Co. _____
title _____
date _____
Signed for _____ by _____
title _____
date _____

Gallery Agreement (short form)

Terms of Consignment: _____
(all items for consignment only)
Consignment _____% to _____
(artist)
_____% to _____
(gallery)
The above percentages are of the retail price set by _____
Conditions: _____
(gallery)
assumes full responsibility for work lost, stolen or damaged while in the possession of the gallery or in transit from the gallery during the period of consignment. The gallery agrees to insure all items for this period. If the work is lost, stolen or damaged, the artist will receive full compensation for his percentage of the retail price of the work. Payment is due within 30 days of sale.

If a work is altered in any manner, the gallery will assume full responsibility and the sale will be considered final by the artist. The gallery assumes the responsibility of the customer's credit. All reproduction rights are reserved by the artist, as well as any and all copyright rights.

The period of consignment is _____ and the work must be shown by the gallery as long as the terms of this contract are in effect.
Additional clauses:
Number of works, description and retail prices listed below (or on attached sheet):

Signed for _____ by _____ title _____
(gallery)
Date _____
Signed _____ Date _____
(artist)

Exhibition Reviews

1. Barbara Mail

Barbara Mail
Greenwood Gallery,
Washington, D.C.
July 8–30, 1980
by Jan Maddox

Inventive, intricate and unexpected combinations of materials characterize the work of Barbara Mail, a young jeweler and enamelist currently working in Philadelphia. This beautifully mounted exhibition of her work, shown with Barbara Shawcroft's fiber sculpture, included 29 objects, ranging from simple production-oriented pieces to larger, more elaborate works of fantasy, wit and commemoration.

These latter pieces were inevitably the most interesting and successful. By varying elements and techniques, Mail has developed a style that conveys an overall consistency yet is delightful in its diversity. Each object has been conceived as an expression of her feelings about a person or idea that is important to her. This personal, autobiographical quality can be romantic and pensive, witty and amusing, and she is in command of the craftsmanship demanded by her expressive purposes.

Mail's ability to control the design and make it subordinate to the total form is especially effective in the larger, more complex pieces, such as "Reliquary for a Ray of Light," which includes a plique-à-jour enamel. Disparate elements: enamel, lenses, ivory and amethysts have been brought together in a sensitive manner which results in an intriguing object.

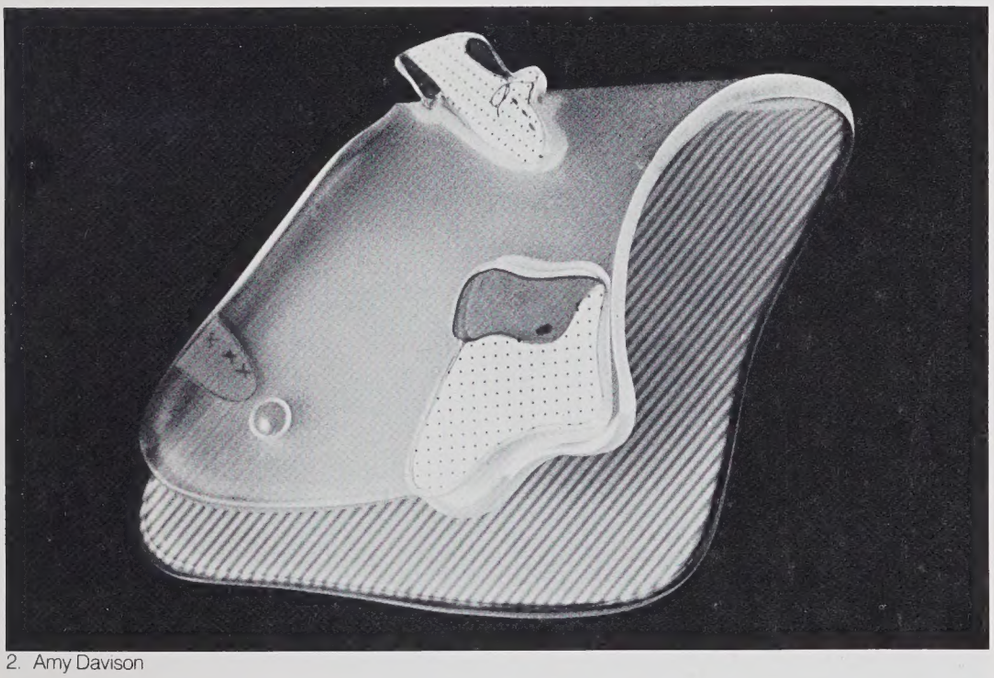
The pieces that include enamels are never just "settings." Each design depends on the interaction of all its parts, and Mail has used colors, textures and shapes to good advantage. Surprising combinations of materials—pressed flowers, tintypes or old photographs, ivory, lenses and semiprecious stones, as well as a variety of metals and plastics, present a variety of technical problems and Mail's solutions give evidence of her ability in a wide range of forming and connection methods. The pieces are all well crafted and her techniques are natural and unobtrusive, never overpowering the expressive quality, but always serving to enhance it and to emphasize her very personal point of view.

2. Barbara Mail

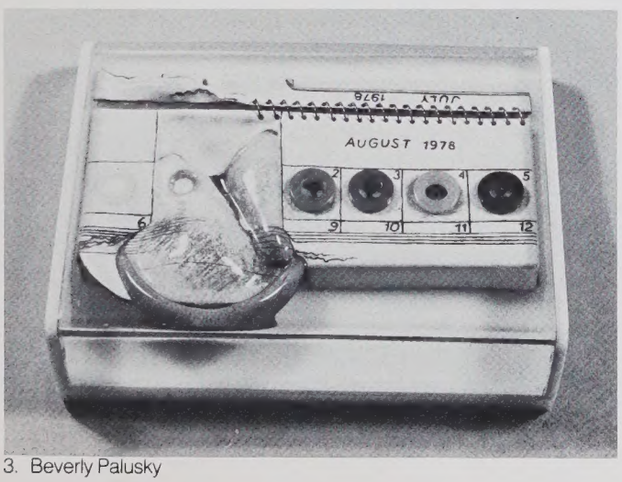
3. Barbara Mail

1. Barbara Mail, *Reliquary for a Ray of Light* container, sterling silver, carved ivory, plique-à-jour enamel, pince-nez optical piece and lenses, amethysts, 4x3x4"
2. Barbara Mail, *Reliquary for Shooting Stars and Other Lost Lovers* container, carved ivory, damascus patterned steel, pressed shooting-star flowers, plexiglas, 14k gold, 3x3x¾". Photo: Marshall Norstein
3. Barbara Mail at work on *Summer Snapdragons and Motionless Wings* wallpiece. Photo: Vincent Pidone

1. Barbara Satterfield



2. Amy Davison



3. Beverly Palusky

Enamels and Plastics: Jewelry and Sculpture

Gallery of Contemporary Metalsmithing
Rochester, New York
June 14–September 6, 1980
by Julianna Furlong Williams

Because my background is in painting, not metalsmithing, my primary concern in critiquing this exhibition was esthetics. In the past, craft criticism seems to have placed most of its emphasis on technique; I think it is time for both critics and craftsmen to go beyond this. All the exhibitors in this show displayed extremely fine craftsmanship. As proved by this exhibition, metalsmithing has arrived at the stage where fine technique can and should be taken for granted.

Ellen Reiben's plastic brooches in plastic envelope containers exuded a fine sense of humor. In the most successful brooches she has broken up the otherwise flat surfaces by the addition of small objects of relief. The envelope containers, obviously a marketing ploy, struck this viewer as just a bit too cute.

Amy Davison's plastic brooches and bracelets possessed an exciting sculptural quality. The motif of small purses and shoes which she is exploring in this series created a curious ambiguity, however. Why purses? Why shoes?

Working in plastic, Linda Mougheimer's use of basic design concepts was refreshing. She was not affected by the decorative quality that dominated much of the other work in the show. Her brooches, attached to plaques, seemed to function better as sculpture than as jewelry.

The light sculptures by James Thomas, using acrylic and fluorescent light were both lyrical and elegant. The sculptures, consisting of sequential acrylic forms, appeared to be constantly in motion, though actually stationary. Unfortunately, the black electrical cord extending from each piece was a distracting element.

Beverly Palusky's work, combining both enamels and plastic, was extremely creative. Her use of graphic images in an unexpected but obviously well planned manner, resulted in beautiful, imaginative pieces.

In the enamels section of this show, Thomas Farrell's work displayed the most sophistication. His subtle use of hard-edge design was very successful. Elizabeth Garrison's work was both nostalgic and elegant. Her use of color and contemporary design in enamel was refreshing, although some of her motifs bordered on cliché. In contrast, Robin Linden's enamels had a decorative delicacy.

Barbara Satterfield's limoges necklace "Heroines of the Opera" contained individual portraits, reminiscent of Greek and Roman coins. Unfortunately, the necklace as a whole did not compliment the beauty of the portraiture. Satterfield showed her best form in "Damsel Fly," an unusually sensitive necklace.

Barbara Mail's painterly use of enamels was exquisite, bringing to mind the delicacy of Japanese art. The subtle organic color relationships set in sculptural forms were unique. The enamel paintings by Helen Hosking were unimaginative.

The diversity in styles, techniques and approaches among the artists resulted in a truly exciting exhibition.

1. Barbara Satterfield, *Heroines of the Opera*, limoges enamel on copper with ceramic overglaze paints, gold beads, amethyst stones set in sterling silver, 18" circumference, 1979
2. Amy Davison, *Pin I*, 4x3x1", 1980
3. Beverly Palusky, *Hand Mirror*, plastics and enamel, 5½x4½1"

Metal/NonMetal
Synopsis Gallery,
Winnetka, Illinois
June 6–July 16, 1980
by Debra Lynn Gold

Although American metalsmithing trespassed the time-honored boundaries of precious metals more than 10 years ago, Synopsis Gallery recently mounted a small but comprehensive review of the use of "nontraditional" materials by metal artists. We might be tempted to ask, "When does nontraditional become convention? Don't we already have a strong tradition of the use of plastics, found objects and the like?" Whatever the answer, the works presented here were valid, and the nonmetal materials were used legitimately, not as substitutes or gimmicks.

Another question which permeated this exhibition was the relevance of our technological society, seen both in the work and in the technological concerns of the use of nontraditional materials. Artists working in mixed media can easily fall prey to the showmanship of technique. The possibilities within each medium become multiplied when used in combination, creating new realms of technical virtuosity. These artists, however, resisted the temptation to rely soley on technique to justify their work and the heart of this exhibition lay in concept. The works, nonetheless, were flawlessly executed and were showed to advantage.

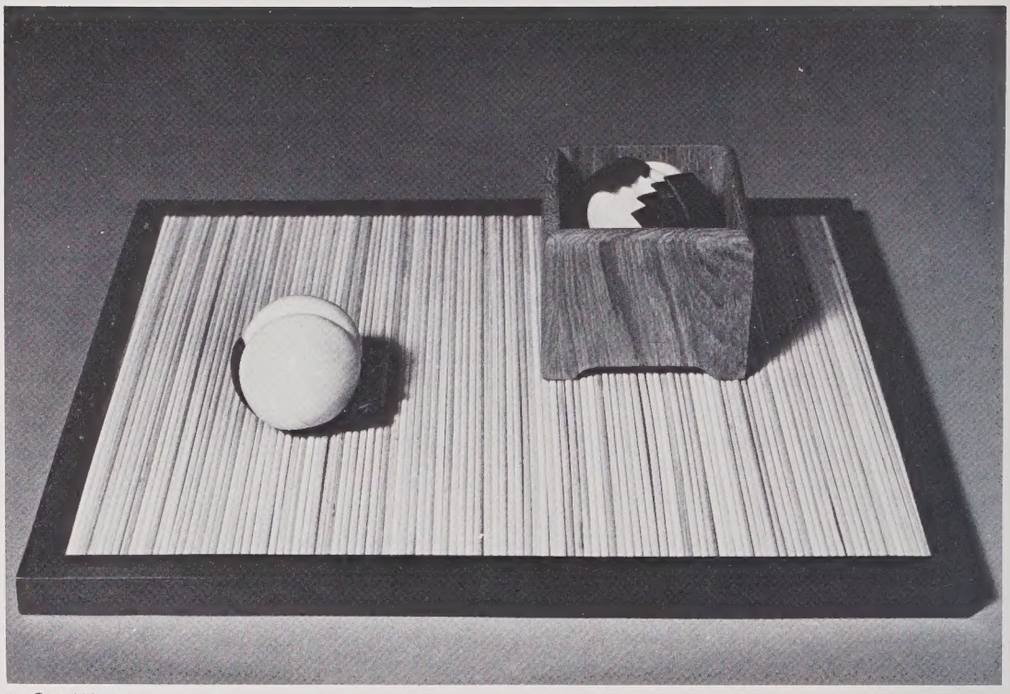
Hilary Packard Phinney, Richard Helzer, Ronna Silver, Amy Davison and Carol Kumata used plastics, paper, wood and so on, either in conjunction with or, in Davison's case, to the exclusion of metal. The nonmetal portion of *Metal/NonMetal* was predominantly plastic. Only Kumata avoided its use entirely.

Hilary Phinney's work was a statement about the nature of the material—plastic. Her pieces employed stacks of sheet acrylic, simply shaped and bound by small wire rivets, used to excess in some cases. Offset shapes offered some interest with the reflective and refractive properties of the plastic, except when darker plastic was used with an opaque background. Integral to her work were scribbled engravings on the various layers of acrylic. These illegible markings, although intended to be enigmatic, were merely a demonstration of inventive surface treatment. All of the pieces sat on a found object—a railroad plate, squashed tin can or piece of wood. The use of these rusted or abandoned relics seemed to allude to the decay of our environment, especially in contrast to the more pristine plastic. Ultimately, however, these raw elements were merely bases, platforms for presenting the riveted plastic packages.

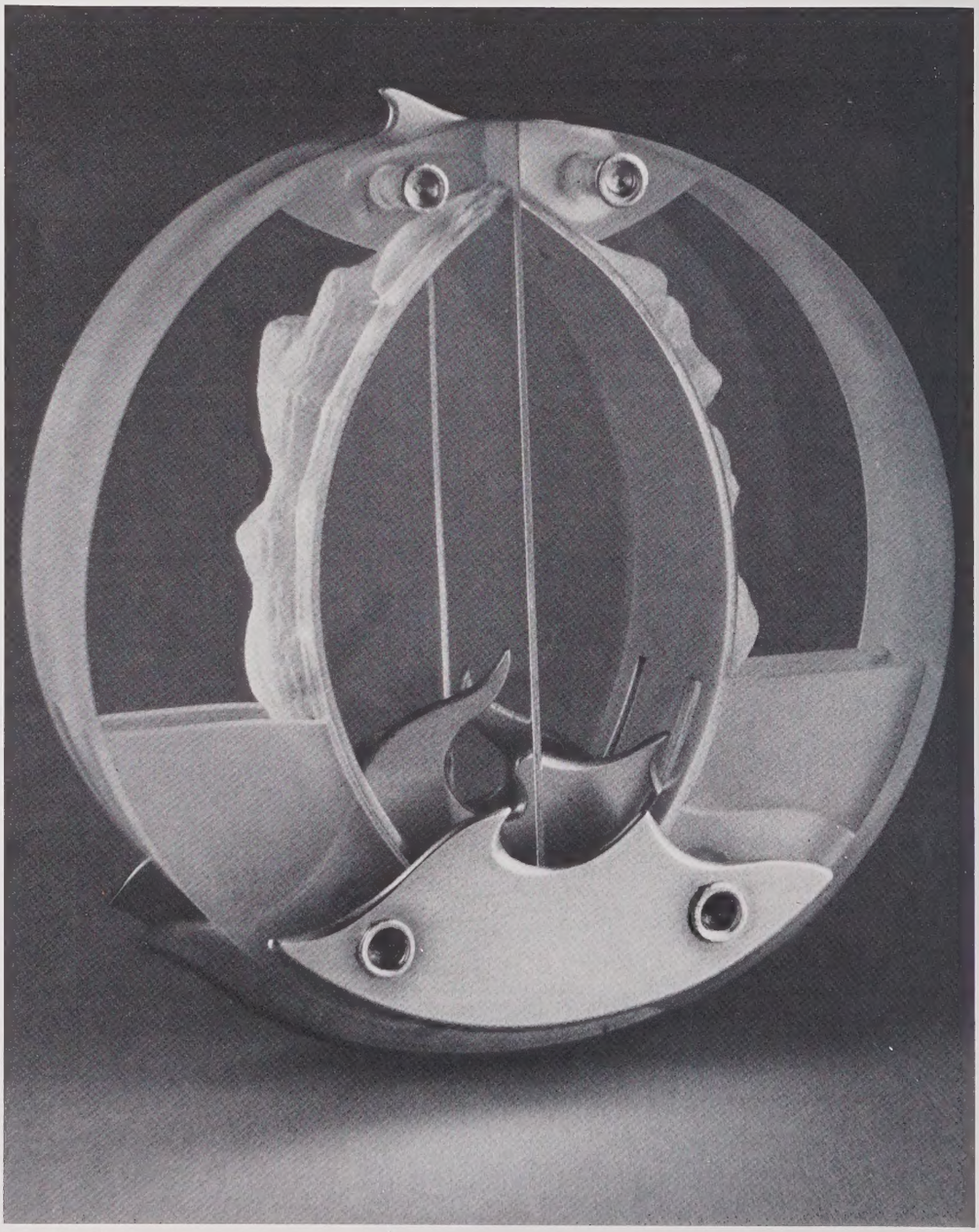
Although Richard Helzer has a long tradition of using plastics in his work, he was more concerned in this show with the nontraditional juxtaposition of jewelry and drawing. His apparent dilemma was whether the drawings were studies for the execution of a piece or whether, in fact, they could be elevated to the same level of significance. If the metalsmith begins to incorporate traditional drawing media into the total presentation, it is imperative that the quality of neither the metalwork nor the drawing be sacrificed for novelty. Craftsmanship must prevail throughout.

Helzer's neckpiece #C8002P meshed his concerns most effectively. The wallmount, or drawing, was not paper but plastic, in which machined lines reiterated the perspective established in the neckpiece by a checkerboard plate of married metals.

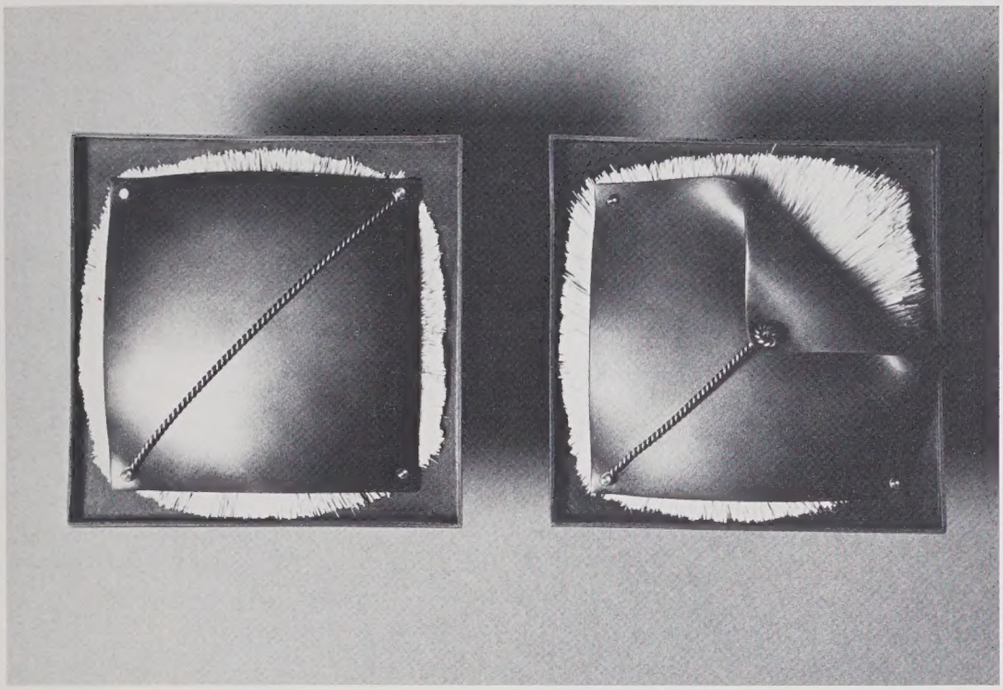
Ronna Silver's "Wave Whistle" and "Sliding Wave Bracelet" both played with the sequential movement of colored plastic sections. These pieces attested to the potential for elegance in combining plastic with silver, with the plastic units subordinated, except in color, to the metal form. Unlike the wave pieces, Silver's "Fantasy Containers" were lively and lyrical, hinting at the content of their interiors through translucent plastic. They



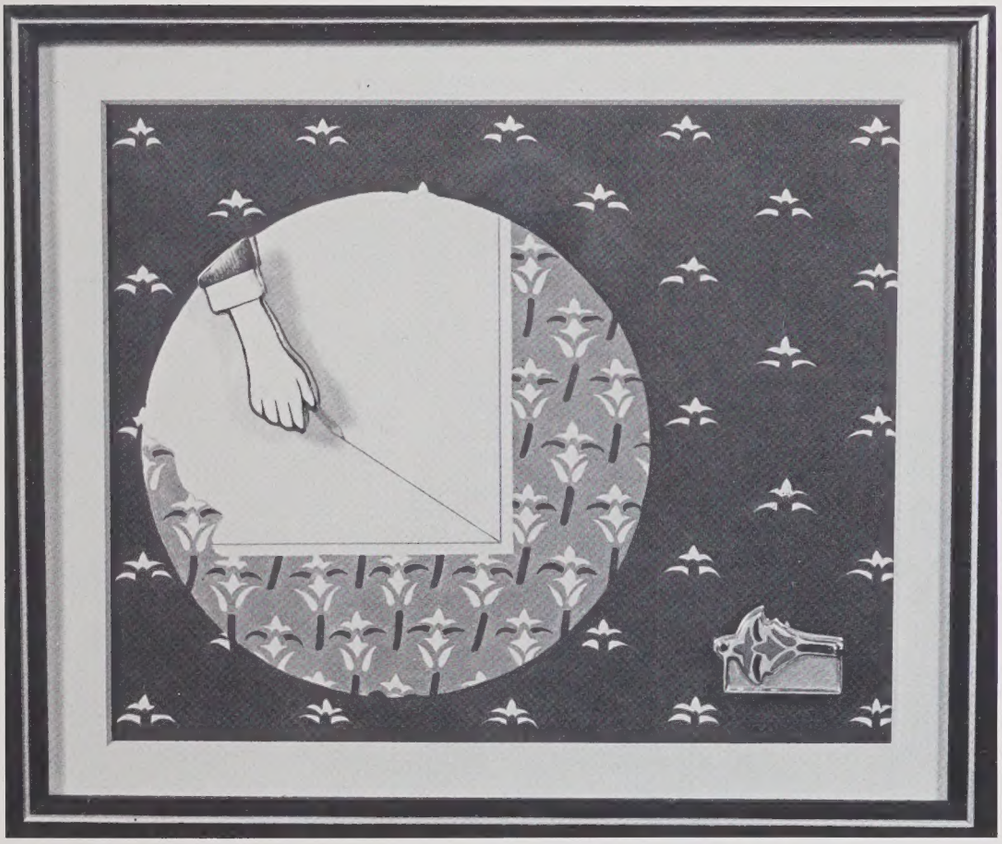
1. Carol Kumata



2. Ronna Silver



3. Carol Kumata



4. Natalie Paul

were not beautiful, but charming, and a distinct digression from her other works.

Amy Davison presented a tight, consistent show. Although dominating in size, the wall pieces retained a jewelrylike quality. In the resin they held precious nostalgia paraphernalia. The overall format was like a giant ribbon, a strip of acrylic bent back upon itself with the encased elements punctuating the flow of the smooth sheet. These pieces were appealing because their baroque quality was achieved with plastic. Davison's most successful image was contained in an untitled pin from the "Animated Purse Series." The dotted film, laminated within the acrylic, undulated with the form, which assumed an animated quality. She is still most comfortable with this smaller format without excessive detail.

The culmination of the exhibition was the work of Carol Kumata. Her materials, ivory, straw, wood, and paper, were deliberately chosen for their rich and subtle color and texture variations. The formal arrangement of elements and materials evoked ongoing events, and the viewer was compelled to ponder on their ambiguous existence within their environment.

Materials alone do not preclude attitude or approach in artistic endeavor. In this show, the natural appeal of color in plastics was exploited only by Davison and Helzer. Phinney's and Helzer's work responded directly to our technological society, while Kumata and Davison sought a personal heritage. Perhaps the common denominator for these five artists is that their concern was not with the flamboyance of nontraditional, nonmetal materials, but rather with using the most appropriate vehicle for their individual statements.

1. Carol Kumata, *Wrappings III*, wood, straw, copper, palm nut ivory
2. Ronna Silver, *Fantasy Container 2*, acrylic, sterling silver, copper, 3x3x1", 1978. Photo: the artist

Natalie Paul: Recent Jewelry and Wall-Piece Combinations

Precious Objects Gallery, Los Gatos, California
July 2–30, 1980
by Audrey Daniels

Natalie Paul's show conveyed an almost mystical vision of repetitive images, enhanced by a clever combination of techniques. Paul created visual illusions which reflected her own femininity, and her delicate and meticulous treatment of materials heightened the desired effect.

Paul's earliest pieces shown here were fabricated sterling brooches, displaying communicative images and embellished with cut stones and china-paint enamels. The enamels delicately lent themselves to the fineness of Paul's linear elements.

Paul's jewelry has recently matured into wall-piece combinations. These serve as an environment to protect and store one or more pieces of jewelry, as well as a natural extension of her brooches and neckpieces into another dimension. Delicately patterned, drawn surfaces serve as a backdrop for similarly fine china-painted pieces.

Surprises often occurred after moments of observation. What appeared to be a drawn image was revealed to actually be a three-dimensional pin. A titillating rush of discovery followed. The magic continued. A pin, when lifted, revealed a drawn shadow of its image.

Natalie Paul's new work provides an exciting solution to the problem of how to enjoy jewelry when it isn't being worn or exhibited. The drawn background provides a showcase and a magical storage place for each piece. The excitement lingers far beyond that of traditional jewelry, since the work is perpetually displayed.

3. Carol Kumata, *Sites I and II*, copper, fiber, bronze, nut ivory, 4x4"
4. Natalie Paul, *Night's Edge*, two pins and framed drawings, sterling silver, sapphire, enamel and chromatic drawing on paper

The Western Edge
Brand Library Art Galleries, Glendale, California
July 12–August 5, 1980
by Hallie Katz

The Western Edge exhibited fine crafts in all media from California, Oregon and Washington, however, 19 of 20 jeweler/metalsmiths featured were from the host state. The jurors were Dextra Frankel, gallery curator at California State University at Fullerton, and Neil Hoffman, dean of Otis Art Institute of Parsons School of Design in Los Angeles. The show was sponsored by Southern California Designer Craftsmen. Artists were invited to enter production crafts as well as one-of-a-kind designer pieces. Although there were many excellent glass, clay, and wood production pieces represented, no jewelry fell into this category. Perhaps jewelers who work every day creating commercially successful and functional pieces do not have time to enter shows. I wish they would. Production indicates simplicity, but that is not a deterent to good design.

The jewelry and metalwork exhibited a great diversity of attitudes towards personal themes and functional forms. However, the majority of pieces were sculptural, using old and new techniques on a monumental scale, rather than on a purely functional level. For example, Jeanne Keefer's pendant/neckpiece "Allegory III" was heavily, although skillfully, crafted of sterling, with blue colored titanium as the collar. Large, angular forms of silver containing a titanium "painting" of clouds as if seen through a window evolved downward from the collar to a sharp point ending at the chest of the unsuspecting wearer. The flat, hard collar looked uncomfortable, as well, and visually did not seem to balance the weighty construction below.

Linda Lasater utilized more traditional materials and techniques to create "Indiana Family Icon." Engraved on sterling, the picture depicted Father, Mother and Child, complete with halos round their heads, the family auto in the background and a smiling sun above! The top part was a detachable brooch, so the sun and it's counterpart, the moonstone, can shine on the wearer in his or her travels. Lasater's expertise in freehand engraving, a technique not used much today, was a pleasure to behold.

Ülle Lepasaar's "Annunciation Window" pendant in gold with a micro-mosaic of semi-precious stones deserves mention for its extremely precise execution. The 2" long pendant contains 41 minute cut and shaped pieces of mother of pearl, lapis, turquoise, opal and the like, that created an abstract design suggesting a shooting star in a wondrous galaxy.

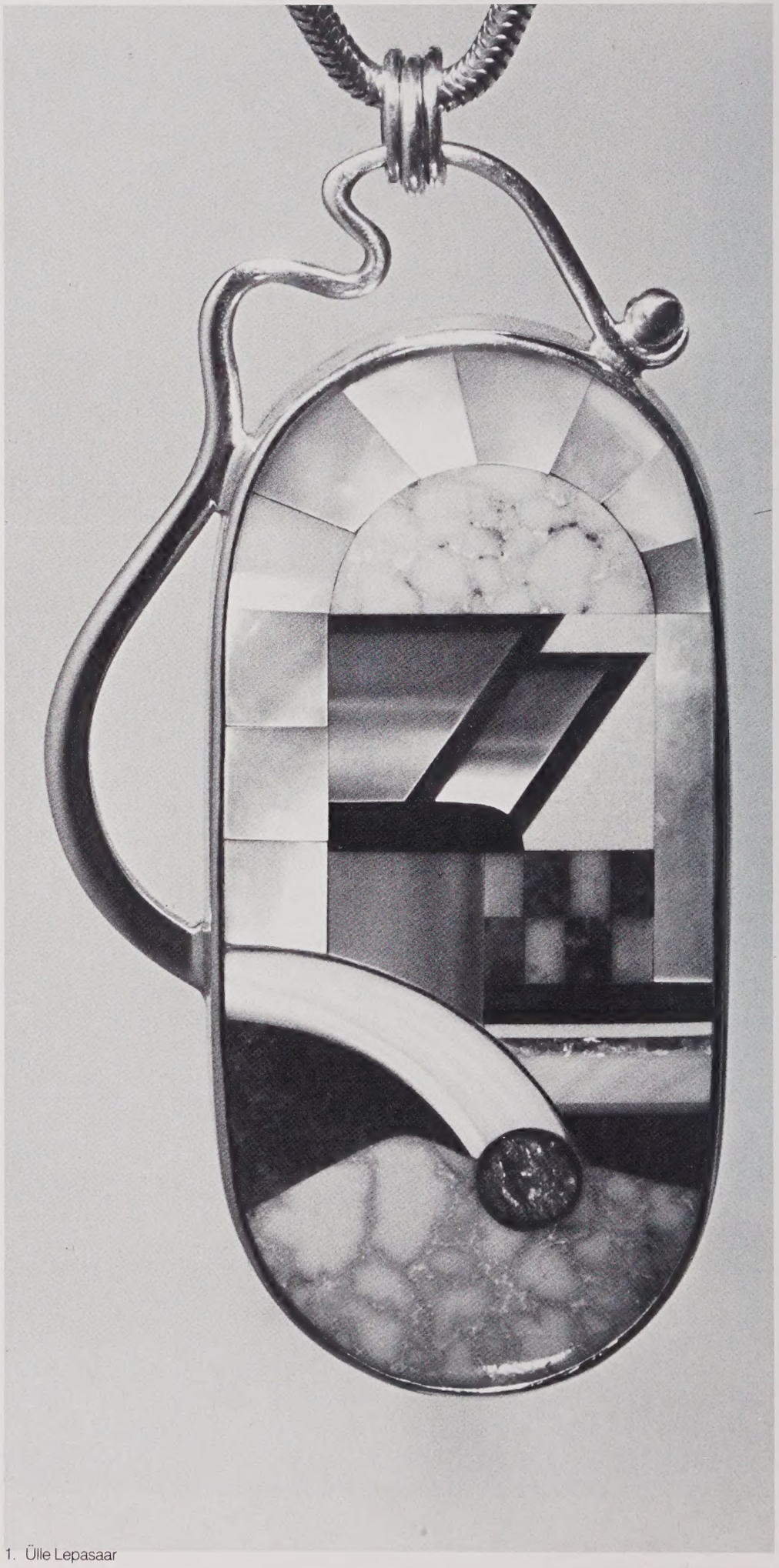
Several works employed woven techniques using fine gauges of silver wire. Marion Brown's "Purse" was a memorial to bygone days of antique mesh purses. This contemporary version had a fine handmade chain, and sported a row of tiny diamonds on the clasp. I liked the neatness of the wirework in this piece, as many times woven metal looks kinked and unruly.

High-tech was evident in Karen McCreary's "Lud 1980." She used flexible metal plumbing hose and connectors, painted gray, to form the neckpiece, with polychromed bronze and plexiglass triangular constructions to complete the spacey effect.

Two rings of 14k gold by Linda Weiss were the closest to the commercial jewelry category. They were cast and highly polished squared-off forms. One was channel set with a square tourmaline and the other with a sapphire.

A small egg-shaped container on a neck cord by Susan Kingsley explored metal inlay work with copper, silver and gold alloys. The patchwork design meandered over the entire surface of this charming piece.

It would have been nice if the *The Western Edge* had represented jewelers and metalsmiths from the three

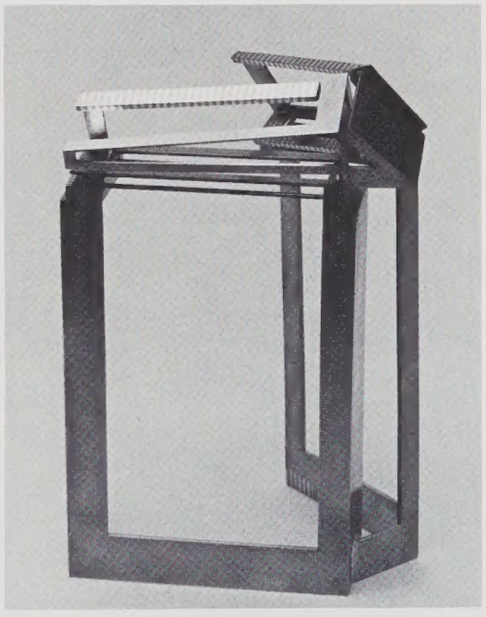


1. Ülle Lepasaar

2. Jeanne Keefer

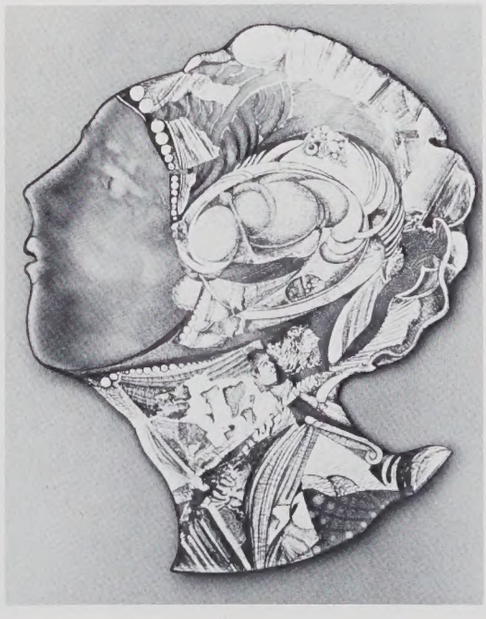
3. Linda Lasater

1. Martha Banyas



2. Leslie Leupp

3. Kurt Matzdorf



4. Harold Helwig

states invited, as hoped. The work did seem a good cross section of that being done in California, however. The work of monumental proportions was well executed and sometimes very exciting, though the large-scale jewelry seemed unwieldly and was even uncomfortable to look at. The smaller pieces were no less exciting, and their function was not forgotten. Whether large or small, jewelry need not sacrifice its artistic expression to be comfortable to wear, if, indeed, it is meant to be worn.

1. Ülle Lepasaar, *Annunciation,* micro-mosaic in semiprecious stones, 14k gold forged and fabricated, 2x7/8"
2. Jeanne Keefer, *Allegory III* neckpiece/pendant, sterling silver, titanium, 1979
3. Linda Lasater, *Icon-Family,* silver, vermeil, moonstone brooch, engraved, fabricated. Photo: Mike Chesser

Off the Body: Metal and Enamels Exhibition

Hartmann Center Gallery
Bradley University,
Peoria, Illinois
September 26–
October 17, 1980
by Karl Moehl

James Malenda brought together 10 craftsmen from around the country to create a remarkably strong and intriguing show. There were 34 objects and six drawings. The variety was immense and more than a little dazzling, but viewers seemed to be caught up in the excitement, and revisits were common and maybe necessary.

The concept of "off the body" was explained as metal and enamel works not meant to be worn, but the inference seems to have been "off the table" and "off the wall" as well. In other words "be gone categories," or "let the pieces stand alone as works of art." For the sake of strict accuracy, two or three objects did seem functional and even wearable, but being outnumbered, they were easy to see as sculpture only.

The artists of *Off the Body* were all top craftsmen: Martha Banyas, Robert Ebendorf, Nilda Getty, William Harper, Harold Helwig, David Keens, Leslie Leupp, Congo Matabi, Kurt Matzdorf and Helen Shirk. The workmanship was impeccable and it would take a different reviewer than this one to say who out-finessed the other, or who exhibited the most astounding technical innovation. Besides, the basic concept of the show didn't invite that sort of thing.

A good exhibition is greater than the sum of its parts. Once the ingredients are combined, the results may surprise the organizer and the participants. This may have been the case here. Rather than list favorites, here is what this reviewer saw in this show.

The pictorial: Banyas exhibited three enamels in cloisonné and painted basse-taille. "Farded Faces" featured a pink female torso with an evil masked head; four alternative masks on the copper frame hung like trophy heads. "Testimony" was erratic and erotic with two nude lovers and an exotic tropical bird in full scream. These managed to be enigmatic and Pop at the same time.

With Helwig the pictorial impulse produced two platterlike forms and one feminine head. These had more than a tinge of pre-Raphaelite elegance. One, "Thoughts," showed a curiously erotic angelic nude that slid along in harmony to the arc of the form, like the stricken Amazon in the Pistoxenos painter's famous Kylix. "Streamers" was more abstract—a haze of rose in basse-taille limoge—but just as hothouse and languid.

The monumental: A good proportion of the works in the show could be seen not just as sculptural, but as maquettes for proposed public works.

1. Martha Banyas, *Farded Faces,* cloisonné and painted enamel on copper
2. Leslie Leupp, *Structures and Platforms II,* nickel and sterling silver
3. Kurt Matzdorf, *Ceremonial Spice Box,* silver and gold plate, amethyst, cultured pearls
4. Harold Helwig, *Thoughts,* transparent enamel over opaque white, engraved copper, silver and gold foil and underglaze on copper

Such was Keen's "Brooches" (I understand everything but the title), which showed two spiked pipes imprisoned in a tight mesh-covered frame, set high on a large pyramidal base. Or Getty's "Silas is Back" could have been a billowing silver tribute to mariners. Shirk defined the monumental as Brancusi did, by finding the infinite sculptural. Her "Black Box," decanter, and lidded container were marvelously balanced unique forms. Their sleekness just fitted the mirroring silver, but could do as well in steel commanding a plaza. Leupp's "Structures and Platforms II" seemed like a cubist doorway, and "Hand Mirror" looked like nothing of the sort, but could have been taken for a plastic fountain.

But the most maquettelike were Ebendorf's "Constructions" of copper, plastic, wood and paper. These were not only monumental, but environmental and could be seen as great sculptural parks. Bundles of copper sheaths were upended and set on platforms, semicylindrical pipes were held fast by guy wires. If some contemporary oil-rich sheik would care to realize this in proper scale, it could rival the Jantar Mantar in Delhi. Ebendorf's drawings developed the environmental aspect further. These large sheets showed a highly creative mind at work. They would have been even better on paper worthy of them.

Matzdorf and Matabi found a place in the show without fitting into the above categories. The former's work was more traditional, although his "Ceremonial Spice Box" veered into fantasy. The latter's work was also traditional, but in another direction. Matabi (the alter-ego of Peter Chamberlain) traced his fancies back to Duchamp. He provided found-objects-aided, like "Nail Piece" and "Clogs," which provided comic relief, although that may not have been the intention. Also, he provided a place to sit down and listen to copper plates with a stethoscope.

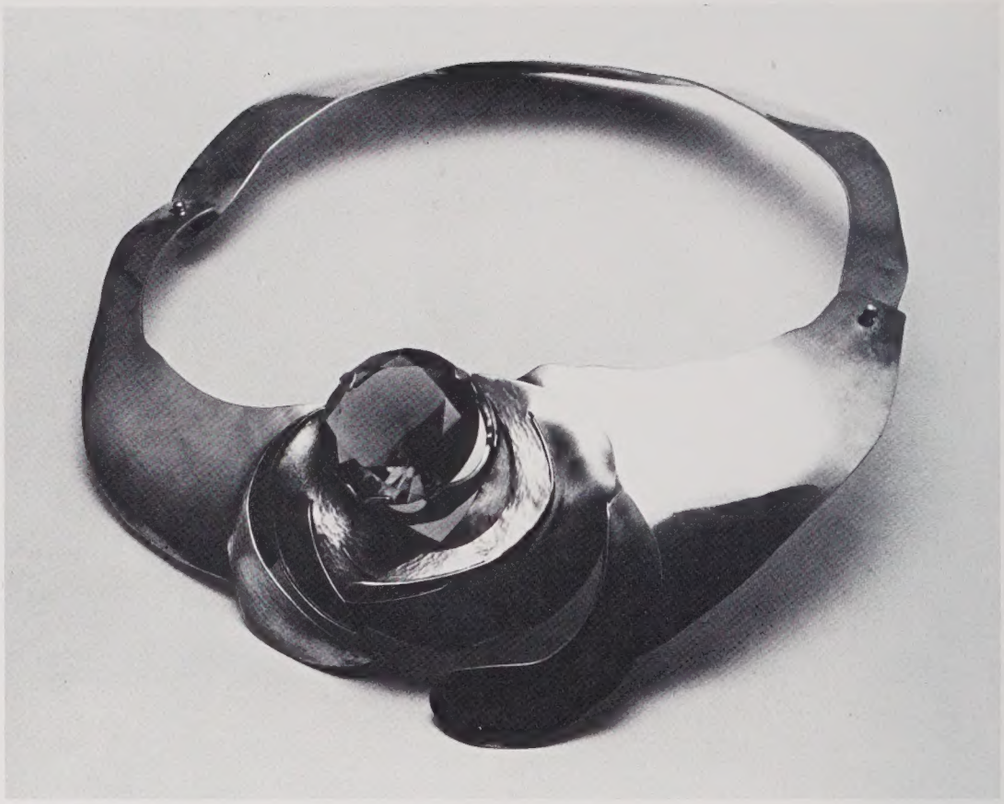
Komelia Hongja Okim

Montgomery College
Art Gallery
Rockville, Maryland
September 3–19, 1980
by Susan Tamulevich

This fall the Washington D.C. area was treated to a solo exhibition of the work of metalsmith Komelia Hongja Okim. The show featured sculpture, holloware, and jewelry. Okim earned her masters in metalsmithing under Alma Eikerman in 1973, and although the Indiana influence is apparent, her own philosophy, combining Korean and American cultures, has resulted in work of unique character with a strong personal statement.

"If I had not become a metalsmith, I would have liked to have been a dancer." In Okim's work the gesture is of primary importance. Her Oriental background manifests itself in the use of gesture to supply the form of her pieces. Her "Cactus Flower" neckpiece, for example, carries a sense of poised calm. The overall circular gesture is built up by curved, flat plains of metal. This is no arbitrary arrangement, for the bands act like brushstrokes to form a calligraphic pictogram, in this case of both a bowing dancer and the circling petals of a flower. And although Okim doesn't really expect the viewers to "see" the root of her abstractions, she hopes that the suggestion will be understood on a subconscious level. The punctuation of a quietly sparkling smoky topaz is used to both reveal the soul of the piece and to anchor it.

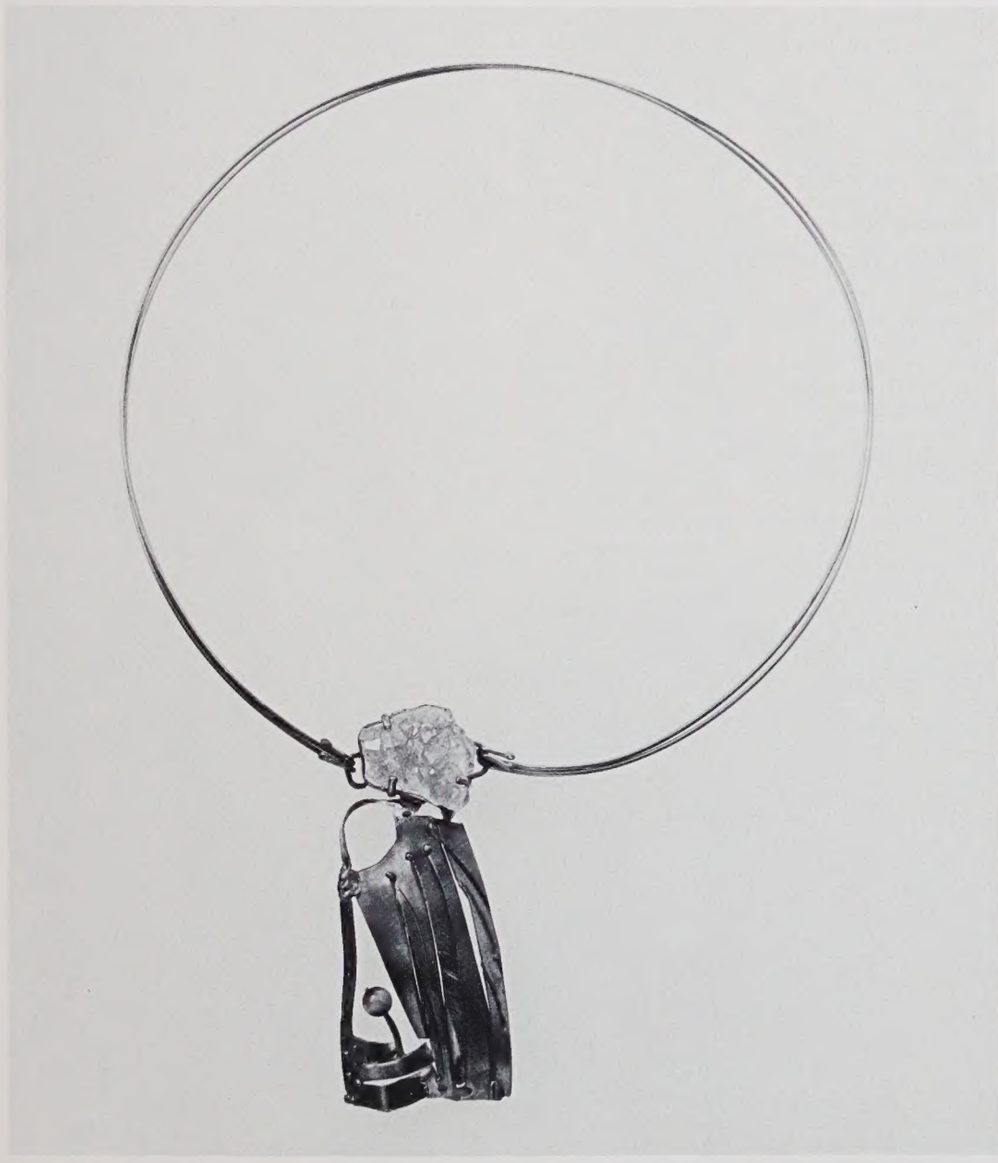
Next in importance in Okim's work are the elements of time and space. She writes, "My imagination is stimulated by the vastness and mysteriousness of the landscape and the undulating linear rhythms of the organic world. I am simultaneously aware of the feelings of tranquility and the unpredictability of hidden energies which have the dual forces of activity and inactivity, broad and narrow, concentrated and less concentrated lines and shapes. These forces interact freely and spontaneously with the



1. Komelia Okim

2. Komelia Okim

3. Komelia Okim



4. Komelia Okim

light and with the surroundings—they flow freely to construct and form the individual parts of my pieces which are then synthesized into bas reliefs or three-dimensional forms." The attempt to balance opposing forces is, again, Oriental. This balancing was evident throughout the show, not only in the surfaces of the pieces but in the layout of the exhibition itself. Cases of small jewelery work contrasted with open groves of sculpture. Of the larger sculptural works, "Trails of a Dream," was an object worthy of contemplation.

It struck me that although Komelia, as head of the crafts department at Montgomery College is host to a diverse assortment of metalsmithing workshops offered through the Greenwood Gallery, she seemed to limit her technique. The work in the show, though spanning a decade, all seemed very unified. "I do not think that techniques in themselves are very important. I am an artist, and for me the idea and feeling behind a piece are what is important." To use a laborious technique for effect is not her style. "I feel that the energy I create while I'm working will show in the finished piece. I'm excited by the process—if I tire of something I leave it until I can come back, fresh."

The "Promenade" series was inspired by the soft columnlike figures in Seurat's "La Grande Jette." The exploration of subtle variations in forms and the contrast between these forms—their interaction, I found fascinating and worthy of further exploration. Here Okim exhibited great delicacy, especially in the shaping of the bases with subtle curves and in her finishing of the surface with a shimmery dematerializing texture.

Komelia Okim has shown her work throughout the eastern United States in such exhibitions as, *Forms in Metal: 275 Years of Historical and Contemporary Works* at the Museum of Contemporary Crafts in New York, 1975; *Goldsmith 1974* at the Renwick Gallery in Washington and the Minnesota Museum, and lately has won first prize in numerous competitions. She is planning a one-person show in Korea in the summer of 1981, as well as an exhibition this spring at Essex Community College in Baltimore.

1. Komelia Okim, *Cactus* shoulder piece, sterling silver, brass, smokey topaz, 12x14", 1980
2. Komelia Okim, *Promenade Six and Seven,* formed and constructed silver, 1x6" and 1x5½", 1980
3. Komelia Okim, *Alladen's Lamp* (right) and *Intimacy* coffee-tea pots, fine silver, each 7x14"; sugar and creamer, each 3x5", 1977
4. Komelia Okim, *Delila,* pendant with neckpiece, sterling silver, crystal and tiger eye, 2x5x10", 1980

American Titanium

Artwear, New York City
June 19–August, 1980
by Whitney Boin

The title of this exhibition, *American Titanium,* which implies a comprehensive survey of Americans working in the medium, was misleading, since only a small regional group was invited to participate. Further misleading was the subtitle, "the first exhibition of titanium jewelry by American artists," as, for the most part, the work was preliminary experiments, due to the lack of working time and the complexity of the technique. Moreover, after months of on-again, off-again preparation and meetings, the essential anodizing equipment was not available. Through the efforts of a few, the equipment was finally built and ready for use in March. The exhibition opened mid-June, months late, and with two abstentions due to the frustrating preliminary planning. Because of this hectic preparation, the show was vague and uneven.

The gallery also seemed a little confused about its function. On opening night the space was totally devoted to *American Titanium,* as it would have been in most galleries. However, as the jewelry sold, it was taken from the cases, the displays were rearranged and filled in with other items, common practice for a retail store. Therefore, people interested in viewing the exhibition saw a disjointed smattering of titanium mixed with other merchandise. This was very confusing, especially if one considers part of a gallery's function is to educate the public.

Titanium is not very malleable, unsolderable with conventional equipment, but light weight, strong and has the ability to refract different colors when an oxide layer is built up. Attention must be paid to the physical manipulation of the metal. Forming, texturing and joining are just a few of the challenges that need to be reckoned with besides the obvious considerations brought about by the injection of color.

James Brent Ward's exploration of refractory metals was the catalyst for this exercise. Ward, who abandoned the modern gold/silver movement because, "every piece I made was always said to be like something which had already been constructed," showed jewelry with an uncanny resemblance to colorful fabric wrappings.

Necklaces and bracelets constructed of twisted wire, bent in circles, used all the vibrant colors titanium could be zapped into producing. Of particular interest to connoisseurs of penny-gumball surprises were small insect pins with cast silver bodies and colorful wings. Other novelties included stamped circular forms with feather motifs, which would make very handsome and colorful keychains.

Bedecking the walls of the store were Ward's plaques, resembling barn ornaments, that would be handy as a reference index to titanium's color spectrums. This was technique as excuse, the development and use of technology not to fill an esthetic need but soley to gain artificial recognition and superficial distinction. The research was unquestionably beneficial to the artistic community, but it is difficult to endure experimentalism misconstrued for esthetic contributions.

Ted Muehling used the heating-anodizing process to enhance and broaden his vocabulary of metallic patinas and plastic colorations. Purple and blue tones were in harmony with his soft and sensuous shell forms. These elements were strung together with fine fused wires recalling images of crustaceans clinging to delicate seaweed. Swinging freely from the bottom of the simplest, one-element earring was a gold wire. In motion, this highly polished bar might simulate a descending dewdrop caught by a flash of light. Tantalum was used in the majority of pieces because of its malleability. Both metals were well suited to Muehling's volumetric designs due to their light weight and he seemed comfortable and at ease with them and their coloration. This work seemed more a continuation or evolution of his previous forms, in contrast to the experimentation of others in the show.

Very similar to Muehling's in both inspiration and content was the jewelry of Robert Morris. A large necklace was fabricated of long, lillylike flared funnel elements, one sprouting another. Unfortunately, the awkward manipulation of these funnels broke the continuity of the cascading forms and subtle blending of blue and purple hues. Ear wires, connected to similar forms, seemed jammed into the abrupt ending atop these funnels. Long, slender leaves inspired large dangle earrings, each in a solid color with varying degrees of saturation.

Typical of both Morris's and Muehling's work was the desire to make jewelry that is completely harmonious with current fashion. Their work, more than any of the others, with the possible exclusion of Ross and Gentille, seemed easier, less self-conscious and contrived. Both the subtle, muted coloring and organic forms, suggested not the thoughtful, disciplined search for esoteric ideas, but a dedication to fashion's fast pace and eclecticism.

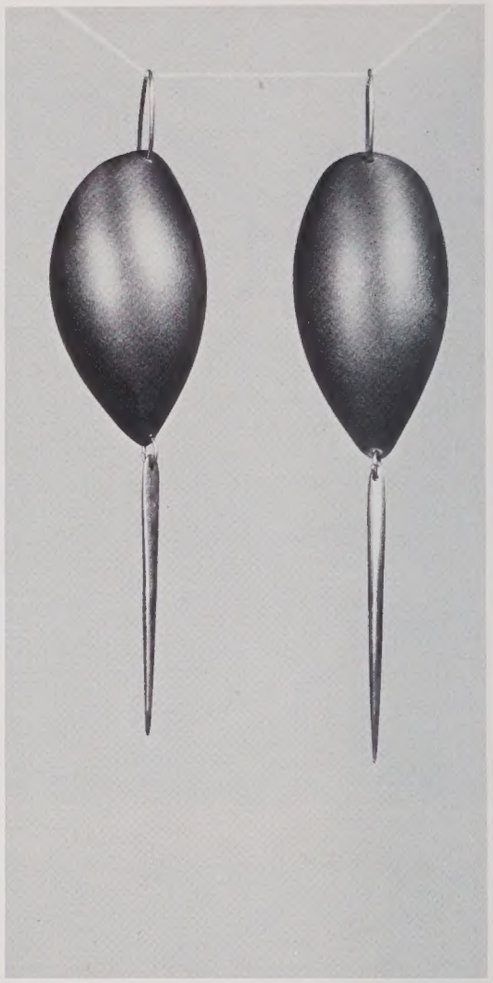
Thomas Gentille submitted a series of hair ornaments, necklaces and tubes. I thought the tubes were practice pieces (but why exhibit practice pieces?); later I learned they were "objects." These highly polished tubes were banded with different colors: "classics," no intent, no content, no feeling. They epitomized the thought (or lack of it) behind the proliferation of the "object."

Cutout shapes of muted primary tones riveted into channeled ebony dowels comprised one of the hair sticks. A thick, color-banded rod, wound around its ebony stick terminating with a large ball, comprised another. The ornaments drew from Oriental and primitive sensibilities, with the craftsmanship echoing these themes. One interesting feature was that the surface on one stick was matted so the color bled slightly and it appeared to have been soldered together in layers. Although the pieces themselves were not too exciting, it was interesting to see the effect of varied surface finishes on the colors.

Kim Bass's half-hearted approach could not be misconstrued for any desire to exploit technology. Her earrings left a definite impression that titanium had been forced upon her. Simplistic forms were the basis for superficial dottings of color. The timid use of color bore no relation to the form and her earrings were heavy, showing no sensitivity to material.

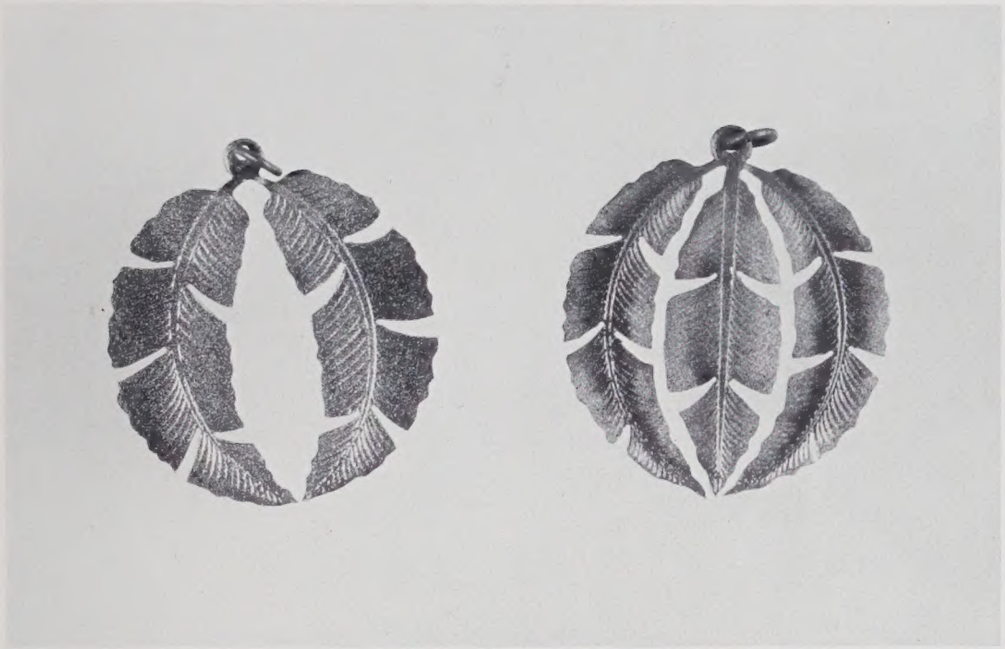
Allison Levy shared Bass's affinity for uninteresting shape and amateurish approach to design. Her earrings featured flat cutouts with broad areas of muted, uninteresting and undistinguishable color. Another series of necklaces, earrings and pins expounded on the coiled-spring theme. Although the titanium wires, colored in subdued tones, were richer and demonstrated a better grasp of the technique, the ends terminated with bulky silver caps.

Ivy Ross seized this opportunity to work titanium with refreshing ingenuity, vitality and intelligence, really exploring both materials and technique. Most successful among the work shown were earrings consisting of two inverted triangular shapes. The top triangle was slightly bowed and had slits cut in the lower corners to accommodate tabs formed by the bottom triangle's upper corners. These tabs were inserted into the slits and bent over securing both pieces together. Brush-anodized blue, the top component evoked the image of a cloud-filled sky, while tiny embossed triangles, also blue, floated in the bottom element's brown background. Their light weight made them wearable without feeling tinny. The surface finish was manipulated in such a way as to vary the character of the color applied. Through this and other similar

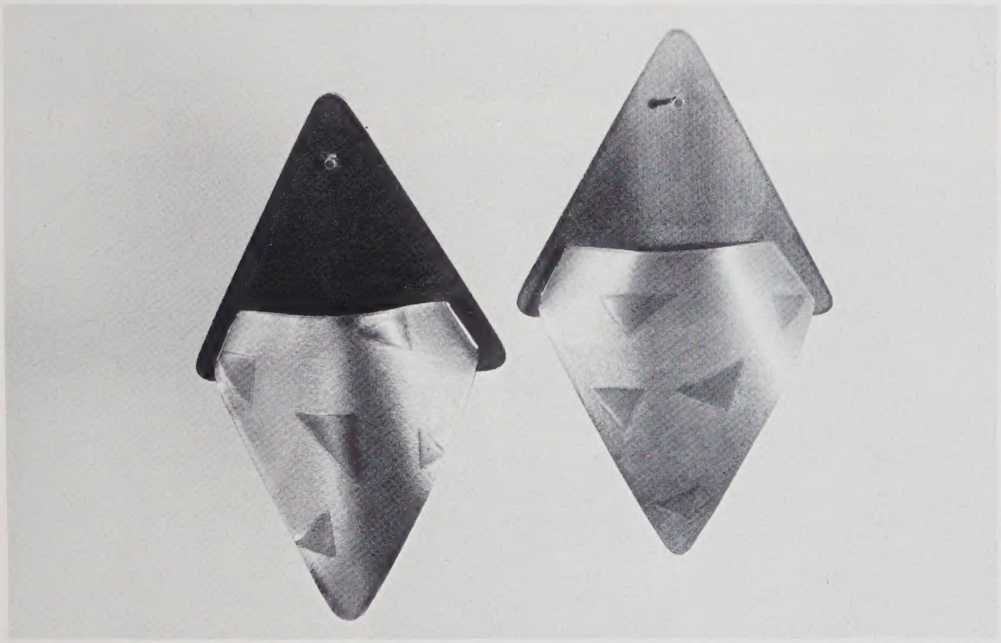


1. Ted Muehling

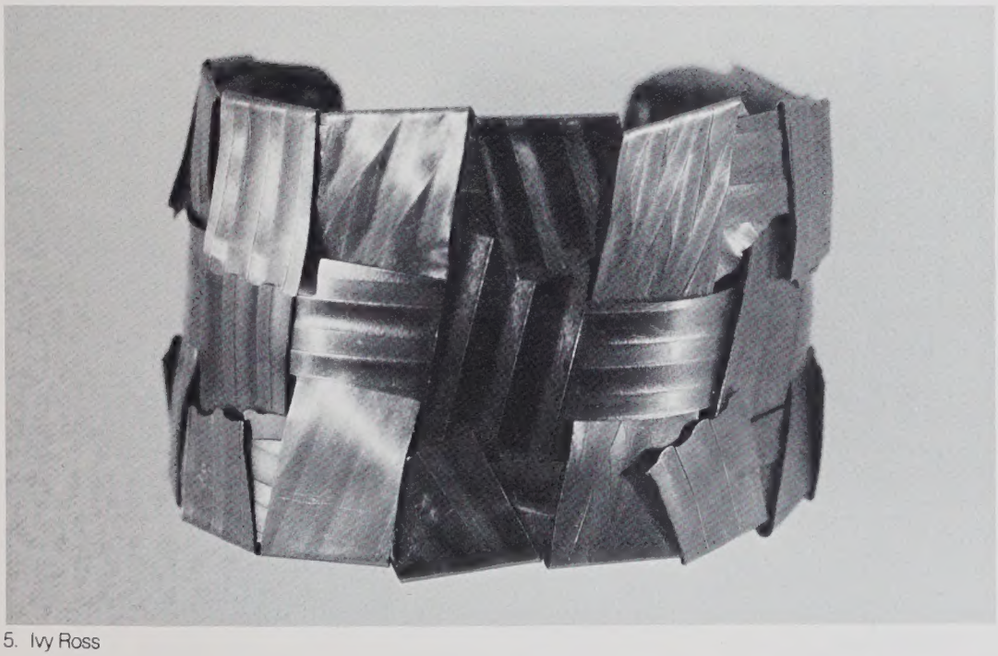
2. Ted Muehling



3. James Brent Ward



4. Ivy Ross



5. Ivy Ross

pieces, Ross was able to rise to the challenges posed by titanium to fully exploit its characteristic properties.

One basic element used by Ross, was embossed and colored with blended earthened hues and displayed rough surface texturing which altered the light refraction. Weaving strips of these basic units, Ross created a series of earrings and braclets whose color was both blended and contrasted as they overlapped each other. Some inconsistencies prevented these woven articles from being totally successful. The backs on both earrings and braclets were heavy; the silver non-pierced backs looked stuck on and one double-twisted braclet, resembling a chip thrown from a lathe, had rather sharp edges.

Pat Flynn exhibited slate set in silver with one edge inset with titanium. The slate was colored with pencil to be compatible with the mauves and blues of the titanium. The unique combination of materials added depth and texture to his pins. Flynn used titanium solely for its coloration properties.

Mary Ann Scherr showed an elaborate dragon of brightly colored, pierced elements; in addition to some lightening-bolt pins of pink and blue hues. A braclet and collar hung with titanium discs were similar in style to her present work in other materials.

The organizers of this exhibition were very anxious to assemble the "first" American titanium show, but, as is often the case, such anxiety supercedes good judgement. As one would expect, this ill-fated venture had a resoundingly hollow tone. The practice of organizing an invitational exhibition focused on one particular material or technique furthers a craft image preoccupied with process, to the detriment of idea. The introduction of new technology is more suited for the workshop-seminar forum, where the results can then be absorbed to expand vocabulary and broaden design options.

It seems misleading and unfair to mount an exhibition called *American Titanium*, and invite only a small group having no prior experience with this technology, while making no effort to extend the opportunity to others who may be doing work worthy of exhibition.

1. Ted Muehling, *Earrings*, titanium, brass, 3x¾"
2. Ted Muehling, *Earrings*, titanium, silver, 3¾x1¾"
3. James Brent Ward, *Circular Forms*, titanium, 1¼"d.
4. Ivy Ross, *Earrings*, titanium, 2x1¾"
5. Ivy Ross, *Bracelet*, titanium, 2"w.

Flux, Fusion, Fireworks

Contemporary Crafts Gallery
Portland, Oregon
September 25–October 25, 1980
by Ramona Solberg

"What is evident is a fine state of energy and esthetic excitement," noted juror Harold Helwig in summing up this exhibition.

Sponsored by the Northwest Enamelists' Guide, *Flux, Fusion, Fireworks* was a breakthrough for enamelists, who usually consider themselves an unrecognized minority. Over 300 works were submitted by 100 artists, and sole juror Helwig narrowed the show down to 75 pieces by 49 enamelists. This remaining group made a strong statement for the present condition of vitreous emameling in the United States.

It was interesting to note that there are definite "pockets" of creative enameling in the four corners of our country—New York, Florida, California, and the Northwest (Washington and Oregon)—followed by smaller concentrations of artists in Ohio and Wisconsin. The final selection for the exhibit represented 18 states.

Enamels seem so tradition-bound that it is always surprising to see variations of well-known techniques; however, several artists here did break the bonds. Photo decals, ceramic decals, and direct drawings covered with clear flux were unique limoge processes utilized by Helen Hosking of New York in her two handsome wall plaques. A raku-fired copper vase by Edward Deren of Florida was another visual and technical surprise. A number of artists used the more familiar photo-etching to create mysterious depths in their bassetaille pieces. Michael Williams of Florida, and Edward Deren used photo-etching complemented by fuming to enrich the glorious iridescent transparents that covered their large-scale pieces.

The more traditional techniques showed great diversity in personal treatment. Martha Banyas of Oregon again exhibited her mastery of skin tones in the luscious female figures of her cloisonné plaques, while the super-controlled, kaleidoscopic limoge images of Christina Gibson-Sears of California were outstanding.

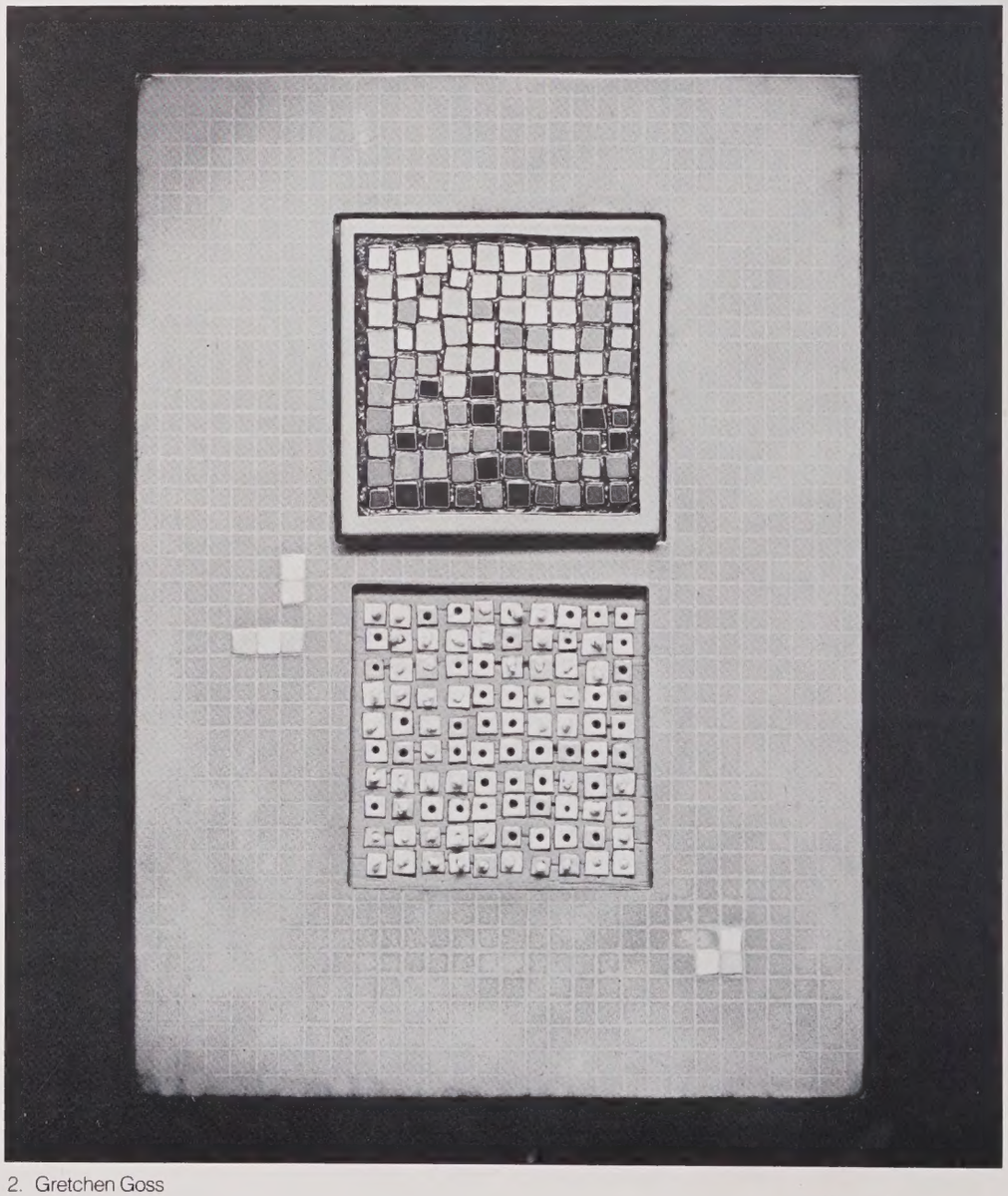
The quality of the metalwork in the enameled jewelry was superior. In many instances the pieces should have been displayed in front of mirrors to exhibit the beauty of the back sides—such as the delicious "Watermelon #2" necklace by Kim Bass of New York and a pair of hollow-form pins by John Reynolds of Massachusetts.

Jewelry made up the largest part of the total show, and it, too, showed amazing diversity of style. The crisp "Blue Dusk" cloisonné pin of Thomas Farrell of New York, and a precisely sawed bassetaille amulet of Kristin Anderson of Wisconsin, contrasted with a fumed cloisonné pin by Richard Johnson of Florida, which had a murky, secretive quality, and a romantic cloisonné pendant, entitled "Four Seasons' Kimono," by Laura Popenoe of California.

Humor was a welcome aspect, revealed in the goggles of Alan Mette of Wisconsin, entitled "Go West, Young Man, Go West." Three delightful sets of cloisonné lenses depicted various aspects of the West. Patrick Strosahl from Washington had a novel champlevé triptic, "Thomas Mann's Dr. Faustus," and of course the humor was built into New York's Yvonne Cupolo's two Mickey and Donald pins.

Award winners in the show were Martha Banyas, Dana Bussell, Edward Deren, Christina Gibson-Sears, John Hamil, Helen Hosking and Michael Williams.

1. John Killmaster



2. Gretchen Goss

1. John Killmaster, *Riddle of Philomela*, limoges enamel on steel, 18x22x1". Photo: C. Bruce Forster
2. Gretchen Goss, *One Hundred over Another*, enamel on copper with cloisonné, string and wood, 18x11". Photo: C. Bruce Forster

Letters to the Editor

Many letters received are of interest to the entire readership. Unless stated otherwise, all letters received may be included in the "Letters to the Editor" section. Letters specifically for this section should be addressed to: Sarah Bodine, Managing Editor, Metalsmith, *35 West 84th Street, New York, NY 10024. Letters should be signed and a return address and telephone number given. The editors reserve the right to edit for publication.*

Dear Editor:
I feel that up until now the metalsmithing field and thus the journal has been composed of metalsmiths talking to and creating pieces almost exclusively for their peers. If this field is to grow esthetically as well as financially, metalsmiths have to start concerning themselves with the outside world. Reaching people beyond the SNAG membership is something that all galleries, I'm sure, are very concerned with. I feel that *Metalsmith* can be very influential in this way, by appealing to the "lay people" as well as the professional. You seem to feel the same way, so I'm hoping to give you some encouragement.
—Deborah Norton, Director
Gallery of Contemporary Metalsmithing

Dear Editor:
I thoroughly enjoyed receiving the first issue of *Metalsmith*. I am pleased to see that the range of articles includes both historic and contemporary subjects. The numerous illustrations are marvelously clear and sharp. You should be very proud . . . I look forward to future issues.
—David Revere McFadden,
Curator of Decorative Arts,
Cooper-Hewitt Museum

Dear Editor:
Wonderful. Outstanding. You have made the move; we are now in a new world!
—Bob Ebendorf

Dear Editor:
Let me compliment you on the first issue of *Metalsmith*. May all the future issues be as fine as this one.
—Leslie F. Brown

Dear Editor:
Delighted to read Bruce Metcalf's essay, "Crafts: Second Class Citizens?" I've been trying to make a similar pitch to the woodworkers. I learned from what he wrote, and I mostly agreed with him—right up to his last section, the future of craft esthetics.

Why, after making such a thoughtful case for the right of crafts to stand on their own as crafts, does he want to see crafts accepted as art? It's enough to let metalworking be metalworking, woodworking be woodworking—or even just jewelry or furniture. Most of what gets pedantic permission to be called art isn't really art, in that it rarely gives the slightest whiff of transcendence of ordinary experience. I'd even argue that most painting is craft, and so is most sculpture—and when you examine "art" in terms of craftsmanship and function, a lot of it is pretty bad. What we should do is add Metcalf's criteria for good craft to the usual esthetic criteria, single out work that scores high on both accounts and be proud of it.

Metcalf's argument goes farther and works better without pleading to make it in the art world. The only good reason I can see for insisting on acceptance as art (besides egomania) is marketing—it increases the price the work can bring. It also restricts the number of potential buyers, probably leaving the maker with no sale at an art price versus repeat business at the craft price. So where's the gain? Why should we care whether the professors who write art history textbooks will certify our work as OK art?
—John Kelsey, Editor
Fine Woodworking

Errata: The editors apologize for misrepresenting Vittoria Cozzi-Olivetti in the last issue—of course, she is a woman.

Editor's note: We are determined to acquire a second-class mailing permit so that *Metalsmith* can arrive on time. Due to post-office red tape, the first two issues must be mailed bulk rate before we qualify for the second-class privileges. Therefore, please be patient if your magazine continues to arrive late; we're working on it.

Opinion

In London recently I went to the 1980 Royal College of Art Degree Show. Among the many media groups there was a special section of jewelry, which is what I concentrated on. The technical standards seemed excellent. But now here's the rub—were they *too* excellent perhaps? There it all was: the clever, skillful use of plastics, titanium, complex riveting, granulation and so on. However, where was creativity, feeling, "esthetic integrity"? Cruder, more primitive, or even honestly childlike work, which had some emotional content, would have intrigued me more. With the exception of silversmith-enamelist Maureen Edgar, whose work was not only beautifully executed, but also imaginative and exciting, the display of superior skill here seemed to me only to add up to a polished, cold monotony. And this really is the core of one thought that I have been chasing around my mind of late.

Enameling certainly has undergone and is still undergoing a renaissance. More and more wonderfully skillful work, particularly in the field of cloisonné, is being produced. Whenever I go to a current enamel exhibit I am quite overwhelmed by the display of skill. And yet I'm a little scared. Ursula E. McCracken says it for me to a certain extent in this quotation from her foreword to the catalog of the Walters Art Gallery Collection of Limoges Painted Enamels (the italics are mine): "But by the end of the 16th century, the most gifted enamellers had died. Although the tradition was being carried on by younger members of the Limosin, Reymond, Courteys and Court families, the great period of painting in enamel had passed. Exhausted by the monotonous reiteration of motifs and *even by its own technical virtuosity*, painting in enamel, which at its height had epitomized the elegant paganism of Fontainebleau, receded to a provincial art."

Oh, shudder, are we enamelists today getting too carried away by technique? We seem to be a demented group, obsessive about avoiding imperfections and intent upon obscure criteria of execution. This obsessive-compulsive quality can be a virtue, but it can also be a possibly fatal flaw.

What is color without line, what is line without form and design, what is form and design without imagination and feeling? In other words, if we become super craftsmen only (I can't say "craftspeople", it's so cumbersome), if we forget that enamel and metal are media, a means to an end and not an end in themselves, we may wake up some day in a boring desert of technical perfection. We need to think hard about drawing the line between getting the maximum results out of our medium and getting dominated by it. No mean task. Which brings me to my second current thought about enameling and the sophisticated problems thereof.

Let's face it. Enameling is a *schizoid* medium—actually it combines two media: itself (enamel) and metal (be it forged, soldered and constructed, cast or simply cut out). Enamel work can be stunningly beautiful and probably as enduring as anything can be in the world today, barring diamonds (and what happens even to them in a nuclear blast?), and when it is good it is a triumph, for it is the result of a fierce wrestling match between artist and media. The potential of these two media so wedded to each other is dazzling. (The problems can also be dazzling.) With respect to the enamel itself, there are endless color combinations of opaques, transparents, opalescents; there can be overlays, mixtures, overfires, underfires, varying reflective qualities, foils. You name it. As for the metal, first, there is the choice of which metal: gold, fine silver, sterling silver, cast sterling, gilding metal, copper, aluminum or steel. Then comes the decision as to how the metal can best be handled—will simply cutting it out do the job? To solder or not to solder? Cast the design? Forge it? The numerous problems of this Siamese twin medium can be grisly. The artist must select from all these possibilities, and coax and control the medium. He (she) must continuously choose, reject. So there's the dichotomy: a huge and exciting range tightened up by the technical complications of combining two vastly different media.

I'd like to end this with a happy note about an artist who has wrestled with the schizoid medium and definitely won. I'm speaking about Fiammetta Hsieh Rubin who recently had a splendid show at the Spring Street Enamels Gallery in New York City. Rubin conceives large, meaningful champlevé and basse taille pictures and groupings of panels in which she demonstrates marvelous skill plus exciting artistic intensity and honesty. Go see her work when next you get a chance.
—Antonia Schwed

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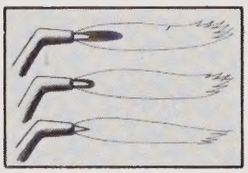

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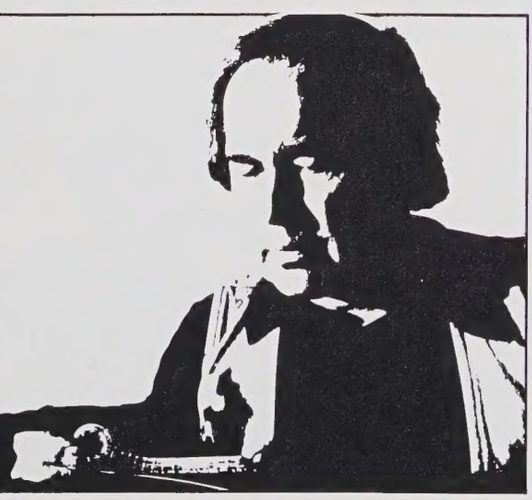

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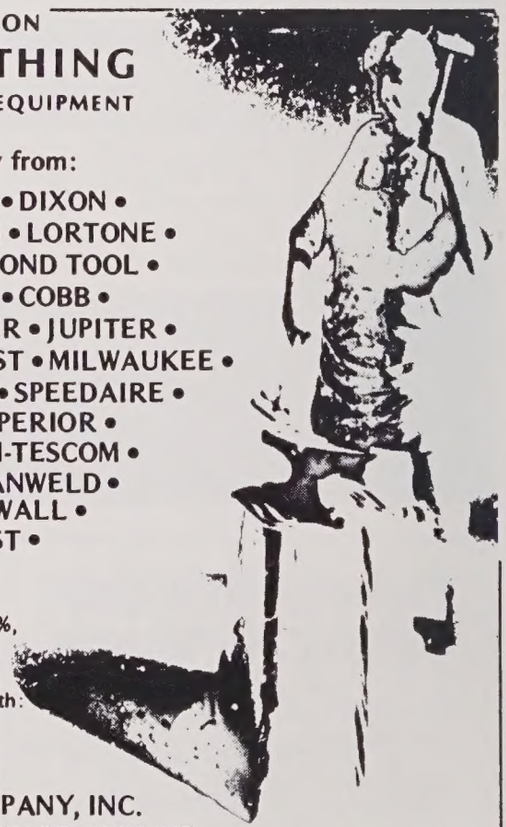

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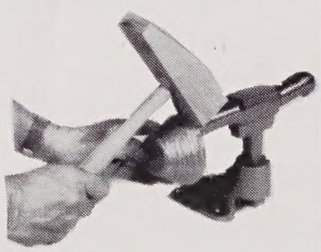

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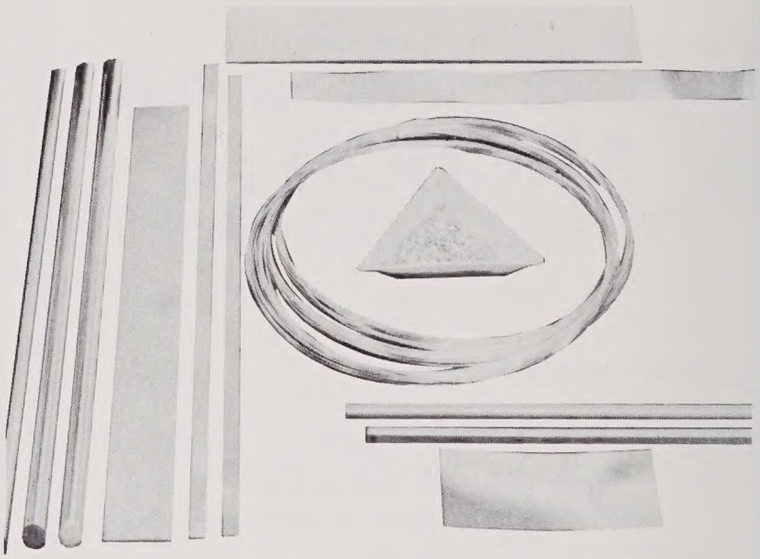

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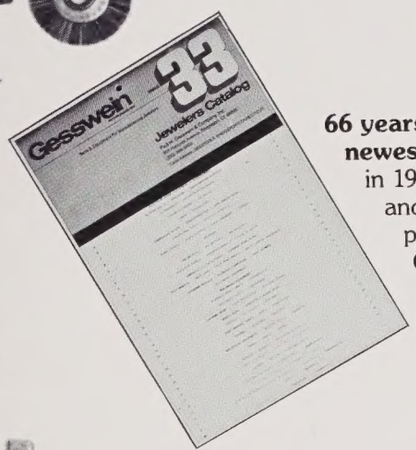

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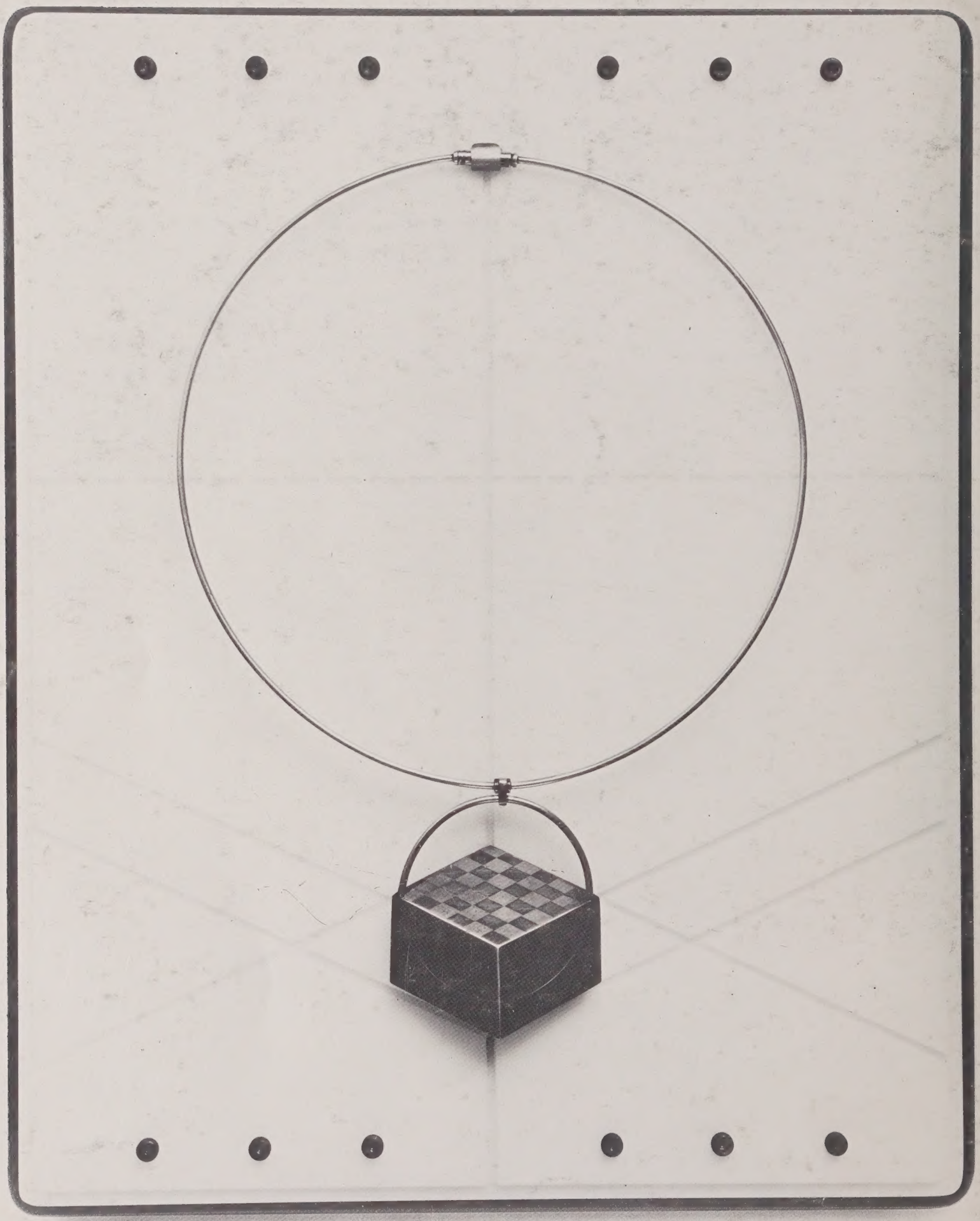
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